



## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
(800) 451-6027  
[www.In.gov/idem](http://www.In.gov/idem)

### **NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT**

Preliminary Findings Regarding a PSD Significant Source Modification and Significant Permit Modification to a Part 70 Source

for **Harrison Steel Castings Company** in **Fountain County**

**Significant Source Modification No.: 045-20845-00002**

**Significant Permit Modification No.: 045-19744-00002**

The Indiana Department of Environmental Management (IDEM) has received an application from Harrison Steel Castings Company located at 900 North Mound Street, Attica, IN 47918, for a Significant Source Modification and a Significant Permit Modification to their Part 70 source. The initial Part 70 Permit for this source was issued on November 30, 2001. Harrison Steel Castings has applied for revisions to the PM and PM10 limits on the Airset line (shakeout process, sand, pouring and cooling, mechanical reclaimer, and thermal reclaimer), the VOC emission limits for the thermal reclaim system which controls the mold sand mixer, the throughput limits and the emission limits established for the north and south sand systems and the re-analysis of BACT for the Airset line pouring and cooling, and shakeout processes. IDEM has reviewed this application, and has developed preliminary findings, consisting of a draft permit and several supporting documents, that would allow the applicant to make this change.

A copy of the permit application and IDEM's preliminary findings are available at:

**Attica Public Library  
305 S. Perry Street  
Attica, IN 47918**

A copy of the preliminary findings is available on the Internet at: [www.IN.gov/idem/air/permits/Air-Permits-Online](http://www.IN.gov/idem/air/permits/Air-Permits-Online).

#### **How can you participate in this process?**

The day after this announcement is published in a newspaper marks the beginning of a 30-day public comment period. During that 30-day period, you may comment on this draft permit. If the 30<sup>th</sup> day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM may hold a public hearing. If a public hearing is held, IDEM will make a separate announcement of the date, time, and location of that hearing. At a hearing, you would have an opportunity to submit written comments, make verbal comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation or a request for a public hearing should be sent in writing to IDEM. If you do not want to comment at this time, but would like to be added to IDEM's mailing list to receive notice of future action related to this permit application, please contact IDEM. Please refer to permit number 045-20845-00002 in all correspondence.

**To Contact IDEM:**

Alic Bent  
IDEM, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for extension (2 or 3-6878)  
Or dial directly: (973) 575-2555, extension 3206  
E-mail: [abent@enviroplan.com](mailto:abent@enviroplan.com)

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor or noise. For such issues, please contact your local officials.

**What will happen after IDEM makes a decision?**

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12<sup>th</sup> floor of the Indiana Government Center North, 100 N. Senate, Indianapolis.

If you have any questions please contact Alic Bent or my staff at the above address.

Original signed by

Paul Dubenetzky, Assistant Commissioner  
Office of Air Quality

For additional information about air permits and how you can participate, please see IDEM's **Guide for Citizen Participation** and **Permit Guide** on the Internet at: [www.IN.gov/idem/guides](http://www.IN.gov/idem/guides).

AB/EVP



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Mr. Pete Bodine  
Harrison Steel Castings Company  
900 Mound Street  
P. O. Box 60  
Attica, IN 47918

Re: 045-20845-00002  
Third Significant Source Modification to  
Part 70 Permit No.: 045-6002-00002

Dear Mr. Bodine:

Harrison Steel Castings Company was issued a Part 70 permit on November 30, 2001, for the operation of steel and ductile iron castings plant. An application to modify the permit was received by the Office of Air Quality (OAQ) on July 19, 2004. On February 11, 2005, the determination was made that a regenerative thermal oxidizer is required as a result of the modification to the permit. Pursuant to the provisions of 326 IAC 2-7-10.5, a significant source modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification is as follows:

- (a) The PM and PM10 limits for shakeout have been increased and the PM and PM10 limits for the other processes (sand, pouring and cooling, mechanical reclaimer, and thermal reclaimer) on the Airset line have been decreased.
- (b) The VOC emission limits for the thermal reclaim system, which controls the mold sand mixer have been amended based on the result of the testing conducted on the thermal reclaim system on May 8, 2003
- (c) New BACT analyses were performed for both the Airset line shakeout and pouring and cooling processes since the existing emission rates did not meet the VOC emissions test results.
- (d) The throughput limits and the emission limits established for the north and south sand systems have been adjusted.

This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(1), which states that any modification subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) requires a significant source modification. There is no new construction due to this proposed project.

Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Alic Bent, c/o OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251, or at 973-575-2555, extension 3206, or dial 1-800-451-6027, and ask for extension 3-6878.

Sincerely,

Paul Dubenetzky,  
Assistant Commissioner  
Office of Air Quality

Attachments  
AB / EVP

cc: File - Fountain County  
U.S. EPA, Region V  
Fountain County Health Department  
Air Compliance Section Inspector – Dick Sekula  
Compliance Data Section - Karen Ampil  
Administrative and Development  
Technical Support and Modeling - Michele Boner



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## DRAFT

### PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Harrison Steel Castings Company  
900 North Mound Street  
Attica, Indiana 47918**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T045-6002-00002	
Issued by: Original signed by Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: November 30, 2001 Expiration Date: November 30, 2006
First Significant Source Modification No.: 045-12788-00002	Issuance Date: June 13, 2001
First Minor Permit Modification No.: 045-15172-00002	Issuance Date: April 23, 2002
First Minor Source Modification No.: 045-20502-00002	Issuance Date: February 25, 2005
Second Significant Source Modification No.: 045-19746-00002	Issuance Date: March 15, 2005
First Significant Permit Modification No.: 045-20240-00002	Issuance Date: May 13, 2005
Second Significant Permit Modification No.: 045-20409-00002	Issuance Date: August 24, 2005
Third Significant Source Modification No.: 045-20845-00002	Pages Affected: Entire Permit
Issued by:  Paul Dubenetzky Assistant Commissioner Office of Air Quality	Issuance Date:  Expiration Date: November 30, 2006

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary steel and ductile iron castings plant.

Responsible Official: Executive Vice President  
Source Address: 900 North Mound Street, Attica, Indiana 47918  
Mailing Address: P.O. Box 60, Attica, Indiana  
SIC Code: 3325, 3321  
County Location: Fountain County  
Source Location Status: Attainment for all criteria pollutants  
Source Status: Part 70 Permit Program  
Major Source, under PSD;  
Major Source, Section 112 of the Clean Air Act  
1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (1) The scrap and charge handling process, constructed in 1951, with a maximum capacity of 24.5 tons of steel per hour, with emissions uncontrolled exhausting through stacks S8 and S10.
- (2) The melting process consisting of the following:
  - (a) One (1) electric arc furnace, identified as EAF2, constructed in 1951 with a maximum melt rate of 4.5 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC4, exhausting through stack DC4.
  - (b) One (1) electric arc furnace, identified as EAF3, constructed prior to October 1974 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC5, exhausting through stack DC5.
  - (c) One (1) electric arc furnace, identified as EAF4, constructed in 1989 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC40, exhausting through stack DC40.

Note: Two (2) baghouses identified as DC38 and DC42 are used to control fugitive melt shop particulate emissions at the roof monitor.

- (3) The pouring, cooling, and shakeout operations consisting of the following:
  - (a) One (1) pouring/casting operation, identified as POUR, constructed in or before 1951 with a maximum capacity of 20 tons of melted steel per hour and 183.68 tons of sand per hour with emissions uncontrolled.

- (b) One (1) casting cooling operation, identified as POUR, constructed in or before 1951 with a maximum capacity of 20 tons of melted steel per hour and 183.68 tons of sand per hour with emissions uncontrolled.
  - (c) One (1) pouring/casting operation, identified as LDL, constructed in 1950, with a maximum capacity of 4.5 tons of melted steel per hour and 24.32 tons of sand per hour with emissions uncontrolled.
  - (d) One (1) casting cooling operation, identified as LDL, constructed in 1950, with a maximum capacity of 4.5 tons of melted steel per hour and 24.32 tons of sand per hour with emissions uncontrolled.
  - (e) One (1) shakeout system, identified as North Shakeout, constructed in 1958, with a maximum capacity of 2.29 tons of steel per hour and 8 tons of sand per hour with emissions controlled by two (2) baghouses, identified as DC2 and DC3.
  - (f) One (1) shakeout system, identified as South Shakeout, constructed in 1965, with a maximum capacity of 57.14 tons of steel per hour and 200 tons of sand per hour with emissions controlled by two (2) baghouses, identified as DC12 and DC9.
- (4) One (1) magnesium treatment operation for producing ductile iron castings, identified as DCTLE, constructed in 1987, with a maximum capacity of 4.5 tons of steel per hour with emissions uncontrolled.
- (5) The shot blasting operations consisting of the following;
- (a) Two (2) twin table blast machines, identified as L3/4 - NTT and L3/4 - STT, both constructed in 1961 each with a maximum capacity of 25 tons of steel per hour with emissions from L3/4 - NTT controlled by baghouse DC16 and emissions from L3/4 - STT controlled by baghouse DC18.
  - (b) One (1) Nelle Belle shotblast machine, identified as Nelle, constructed in 1955 with a maximum capacity of 60 tons of steel per hour with emissions controlled by a baghouse, identified as DC7.
  - (c) One (1) Wheelabrator Frye shotblast machine, identified as #16 Monorail, constructed in 1976 with a maximum capacity of 25.7 tons of metal per hour with emissions controlled by a baghouse, identified as DC17.
  - (d) Two (2) room blast machines, identified as LN3-Rm and LN5-S Rm, constructed in 1962 and 1967, respectively, with a maximum capacity of 8 tons of steel per hour each with emissions from LN3-RM controlled by baghouse DC30 and emissions from LN5-S Rm controlled by baghouse DC28.
  - (e) One (1) room blast machine, identified as LN5-N, constructed in 1960 with a maximum capacity of 10 tons of steel per hour with emissions controlled by a baghouse, identified as DC11.
  - (f) One (1) room blast machine, identified as LN2-N, constructed in 1981 with a maximum capacity of 13 tons of steel per hour with emissions controlled by a baghouse, identified as DC23.

- (g) One (1) tumble blast machine, identified as LN1-TMBL, constructed in 1945 with maximum capacity of 4.5 tons of steel per hour with emissions controlled by a baghouse, identified as DC10.
- (h) One (1) blast machine, identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC8.
- (i) One (1) monorail blast machine, identified as #18 Monorail, constructed in 1980 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC21.
- (j) One (1) room blast machine, identified as LN2-S Rm, constructed in 1979 with a maximum capacity of 7 tons of steel per hour with emissions controlled by a baghouse, identified as DC33.
- (k) One (1) chill room tumble blast machine, identified as Chill Tmbl, constructed July 1, 1977, with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (l) One (1) chill room cabinet blast machine, identified as Chill Cbnt, constructed in 1978 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (m) One (1) pangborn rotoblast machine, identified as LN2-T, to be constructed by 2005 with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.
- (6) One (1) sand handling system, identified as North Sand Handling System, constructed in 1988 and modified in 1994 with a maximum capacity of 8 tons of sand per hour with emissions controlled by a baghouse, identified as DC41.
- (7) One (1) sand handling, identified as South Sand Handling System, constructed in 1967 and modified in 1988 with a maximum capacity of 200 tons of sand per hour with emissions controlled by four (4) baghouses, identified as DC20, DC35, DC36, and DC39.
- (8) Core and mold making operations consisting of the following:
  - (a) One (1) Isocure core making machine equipped with a mixer, identified as Isocure, constructed in 1995 with a maximum capacity of 4.5 tons of sand per hour equipped with a scrubber to control TEA emissions, and with a one (1) ton new sand storage hopper and a seven (7) ton new sand storage hopper.
  - (b) One (1) Airset core making machine equipped with a mixer, identified as Pep Core, constructed in 1989 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled. The Airset core making system consists of two (2) core sand mixers, one constructed in 1989 and the other to be constructed in 2005, with maximum capacities of 9 tons of sand per hour and 6 tons of sand per hour, respectively.
  - (c) One (1) Pepset mold making machine equipped with a mixer, constructed in 1994 with a maximum capacity of 45 tons of sand per hour with emissions uncontrolled.
  - (d) One (1) Oil core making machine, identified as Red CO<sub>2</sub>, constructed in 1988 with

- a maximum capacity of 0.05 tons of sand per hour with emissions uncontrolled.
- (e) One (1) Airset core making machine equipped with a mixer, identified as Zircon, constructed in 1992 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled.
  - (f) Five (5) Oil Sand core making benches, constructed in 1959, each with a maximum capacity of 0.4 tons of oil sand per hour or 0.6 tons of CO<sub>2</sub> sand per hour.
  - (g) Two (2) Shell core making machines, constructed in 1962 and 1973, each with a maximum capacity of 0.075 tons of sand per hour.
  - (h) One (1) Shell core making machine constructed in 1976, with a maximum capacity of 0.125 tons of sand per hour.
  - (i) One (1) Airset core making machine equipped with a mixer, constructed in 1976, with a maximum capacity of 16.5 tons of sand per hour.
  - (j) One (1) core wash process, constructed prior to 1977, with emissions uncontrolled and exhausting internally.
- (9) One (1) natural gas-fired surface combustion heat treat furnace, identified as L7SC, constructed in 1997 with a maximum capacity of 24.5 million British thermal units per hour, with emissions uncontrolled.
- (10) One (1) new Airset molding line rated at a maximum steel production rate of 15.73 tons of steel or iron per hour and 47.2 tons of sand per hour. The Airset molding line consists of the following processes/equipment:
- (a) pouring operations with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with emissions uncontrolled and exhausting through stacks S37 through S42;
  - (b) castings cooling operations with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with emissions uncontrolled and exhausting through stacks S37 through S42;
  - (c) shakeout operations with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with particulate emissions controlled by one (1) baghouse, identified as DC12, and exhausting to stack DC12;
  - (d) sand handling operations with a maximum capacity of 47.2 tons of sand per hour, with emissions controlled by a baghouse identified as DC46, and exhausting to stack DC46. The sand handling system consists of the following equipment:
    - (1) six sand storage silos, each controlled by a bin vent;
    - (2) four (4) sand heaters;
    - (3) covered pneumatic conveyors for transporting sand from silos to mixer;

- (e) mechanical reclaim operations with a maximum capacity of 47.2 tons of sand per hour, with emissions controlled by a baghouse identified as DC45 and exhausting to stack DC45;
- (f) one natural gas fired thermal reclaimer, with a maximum heat input capacity of 2.83 million Btu per hour, with a maximum capacity of 2.85 tons of sand per hour, with emissions controlled by a baghouse identified as DC46 and exhausting to stack DC46;
- (g) phenolic urethane no-bake mold making operations with a maximum capacity of 47.2 tons of sand per hour. The mold making operation consists of the following equipment.
  - (1) one enclosed mixer for combining mold sand with resin, with VOC emissions controlled by the thermal sand reclaimer;
  - (2) strike off operations;
  - (3) rollover draw/strip operations;
  - (4) one natural gas fired preheat tunnel with a maximum heat input capacity of 0.8 million Btu per hour;
  - (5) mold wash operations with a maximum capacity of 230.69 pounds of mold wash per hour, which is equivalent to 11.34 gallons of mold wash per hour;
  - (6) one natural gas fired drying (curing) oven, with a maximum heat input capacity of 3.2 million Btu per hour; and
  - (7) one mold closer process which puts the two halves of the mold together.

Note: Each individual shakeout unit has a maximum design capacity of 10 tons of metal per hour; however, the pouring and cooling operations bottleneck the shakeout process, such that the total hourly rate at shakeout cannot exceed 15.73 tons of metal per hour.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
[326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Machining where an aqueous cutting coolant continuously floods the machining interface. [326 IAC 6-3-2]
- (b) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume.[326 IAC 6-3-2]
- (c) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]
  - (1) Grinding machines each with a maximum capacity of 18.9 pounds per hour with emissions controlled by baghouses, identified as DC13, DC14, DC26, and DC37.
  - (2) One (1) pattern woodworking shop with emissions controlled by a roto-clone, identified as DC1.

- (d) Flame cutting - natural gas and oxygen torch to remove gates, spurs, and rizers.[326 IAC 6-3-2]
- (e) Flame wash - arc welding like torch to smooth castings after flame cutting.[326 IAC 6-3-2]
- (f) One (1) paint booth for coating metal castings, constructed prior to 1977, utilizing air assisted airless spray type, with VOC emissions uncontrolled and overspray controlled by using a filter wall, with emissions exhausting to stack S154.[326 IAC 6-3-2]

Mold making operations consisting of the following:

- (g) Four (4) green sand molding machines, identified as #20 Jolt, #8 Jolt, #13 Jolt, and #21 Jolt constructed in 1941, 1929, 1930, and 1996, respectively, each with a maximum capacity of 13 tons of sand per hour.[326 IAC 6-3-2]
- (h) One (1) green sand molding machine, identified as Herm Jolt, constructed in 1977 with a maximum capacity of 26 tons of sand per hour with emissions uncontrolled.[326 IAC 6-3-2]
- (i) Two (2) green sand molding machines, identified as #14 Jolt and #10 Jolt, constructed in 1935 and 1929, respectively, each with a maximum capacity of 8 tons of sand per hour with emissions uncontrolled.[326 IAC 6-3-2]

#### A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22); and
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## SECTION B

## GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

### B.2 Permit Term [326 IAC 2-7-5(2)]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

### B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

### B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

### B.7 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)] [326 IAC 2-7-6(6)]

- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality. [326 IAC 2-7-5(6)(E)]

- (c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

**B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]**

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- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
  - (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; or
  - (3) Denial of a permit renewal application.
- (b) Noncompliance with any provisions of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.
- (c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

**B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]**

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- (a) To the extent specifically designated by this permit or required by an applicable requirement, compliance reports (including testing, monitoring, reporting, and record keeping requirements set forth in Sections D) prepared by the Permittee and submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

**B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]**  
**[326 IAC 1-6-3]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation.
- (c) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

**B.12 Emergency Provisions [326 IAC 2-7-16]**

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

**B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]**

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. All previously issued operating permits are superseded by this permit.
- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
  - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ has issued the modification. [326 IAC 2-7-12(b)(7)]

**B.14 Multiple Exceedances [326 IAC 2-7-5(1)(E)]**

Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.

**B.15** Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report.

The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

**B.16** Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
- (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

**B.17 Permit Renewal [326 IAC 2-7-4]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]
  - (1) A timely renewal application is one that is:
    - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
    - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
  - (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]  
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]  
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

**B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

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- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251  
  
Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]  
[326 IAC 2-7-12 (b)(2)]**

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- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

**B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]**

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:
  - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
  - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
  - (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b), (c), or (e). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
  - (1) A brief description of the change within the source;
  - (2) The date on which the change will occur;
  - (3) Any change in emissions; and
  - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Emission Trades [326 IAC 2-7-20(c)]

The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]

The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

**B.21 Source Modification Requirement [326 IAC 2-7-10.5]**

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A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

**B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2]**

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy any records that must be kept under the conditions of this permit;
- (c) Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251  
  
The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

**B.25 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]**

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For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source
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### Emission Limitations and Standards [326 IAC 2-7-5(1)]

**C.1**     Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

**C.2**     Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a)     Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b)     Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**C.3**     Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

**C.4**     Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

**C.5**     Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

**C.6**     Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on April 7, 1995. The plan includes the following:

- (a)     Using wet suppression for stockpiles and unpaved roads on an as-needed basis.
- (b)     Sweeping paved roads on an as-needed basis.

**C.7 Stack Height [326 IAC 1-7]**

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The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d)(3), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

**C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3). All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) **Procedures for Asbestos Emission Control**

The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or Renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

### **Testing Requirements [326 IAC 2-7-6(1)]**

#### **C.9 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### **C.10 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

## **Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

### **C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

### **C.12 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]**

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- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less often than once an hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

### **C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

### **C.14 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

**C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:  
  
Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251  
  
within ninety (90) days after the date of issuance of this permit.  
  
The ERP does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) If the ERP is disapproved by IDEM, OAQ the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

**C.16 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]**

---

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and
- (c) A verification to IDEM, OAQ, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**C.17 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records;
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

**C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

#### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### **C.19 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]**

- 
- (a) Pursuant to 326 IAC 2-6-3(b)(2), starting in 2008 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1 (32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

##### **C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]**

- 
- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
  - (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

- (c) If there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, other than projects at a Clean Unit, which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1 (rr)), the Permittee shall comply with following:
- (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, document and maintain the following records:
    - (A) A description of the project.
    - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
    - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
      - (i) Baseline actual emissions;
      - (ii) Projected actual emissions;
      - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii); and
      - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
  - (2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
  - (3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

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C.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

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- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C- General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
  - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx), for that regulated NSR pollutant, and
  - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for a project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
  - (1) The name, address, and telephone number of the major stationary source.
  - (2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C- General Record Keeping Requirements.
  - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).
  - (4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management  
Air Compliance Section, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

- (h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

## **Stratospheric Ozone Protection**

### **C.22 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

The scrap and charge handling process, constructed in 1951 with a maximum capacity of 24.5 tons of steel per hour, with emissions uncontrolled exhausting through stacks S8 and S10.

Note: Emissions from the scrap yard are fugitive emissions.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the scrap and charge handling process shall not exceed 35.0 pounds per hour when operating at a process weight rate of 24.5 tons of charge materials per hour. The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in this facility description box is descriptive information and does not constitute enforceable conditions.

The melting process consisting of the following:

- (a) One (1) electric arc furnace, identified as EAF2, constructed in 1951 with a maximum melt rate of 4.5 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC4, exhausting through stack DC4.
- (b) One (1) electric arc furnace, identified as EAF3, constructed prior to October 1974 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC5, exhausting through stack DC5.
- (c) One (1) electric arc furnace, identified as EAF4, constructed in 1989 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC40, exhausting through stack DC40.

Note: Two (2) baghouses identified as DC38 and DC42 are used to control fugitive melt shop particulate emissions at the roof monitor.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the following conditions shall apply:

- (1) The allowable PM emission rate from the electric arc furnace (EAF2) shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons of metal per hour.
- (2) The allowable PM emission rate from the electric arc furnace (EAF3) shall not exceed 19.2 pounds per hour when operating at a process weight rate of 10 tons of metal per hour.
- (3) The allowable PM emission rate from the electric arc furnace (EAF4) shall not exceed 19.2 pounds per hour when operating at a process weight rate of 10 tons of metal per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

#### D.2.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

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In order to render the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable, the following conditions shall apply:

- (a) The PM emissions from the baghouse DC40 controlling the electric arc furnace (EAF4) shall not exceed 5.48 pounds per hour.
- (b) The PM-10 emissions from the baghouse DC40 controlling the electric arc furnace (EAF4) shall not exceed 3.20 pounds per hour.

Therefore, the requirements of 326 IAC 2-2(PSD) and 40 CFR 52.21 do not apply.

#### D.2.3 Electric Arc Furnace Maximum Capacity

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- (a) The maximum melt rate of the electric arc furnace (EAF2) shall not exceed 4.5 tons of steel or iron per hour.
- (b) The maximum melt rate of the electric arc furnace (EAF3) shall not exceed 10 tons of steel or iron per hour.
- (c) The maximum melt rate of the electric arc furnace (EAF4) shall not exceed 10 tons of steel or iron per hour.

Any change or modification to these units that would increase the capacity will need prior approval from IDEM.

#### D.2.4 Electric Arc Furnace Production [40 CFR 60, Subpart AAa]

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None of the electric arc furnaces at this source shall be used to produce any intermediate products, such as steel bars, billets, etc. Therefore the requirements of the New Source Performance Standard (NSPS) Subpart AAa (Electric Arc Furnaces) shall not apply.

#### D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these electric arc furnaces and all baghouses listed in this section.

### Compliance Determination Requirements

#### D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 60.275a][326 IAC 2-1.1-11]

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No later than 12 months after issuance of this permit, the Permittee shall perform PM and PM10 testing using methods as approved by the Commissioner, in order to demonstrate compliance with conditions D.2.3 and D.2.4. PM testing is required for baghouses DC4, DC5, and DC40. PM10 testing is only required for baghouse DC40 controlling the electric arc furnace EAF4. These tests shall be repeated at least once every two and a half (2.5) years from the date of a valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable and condensable PM10.

#### D.2.7 Particulate Matter

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In order to comply with the requirements of Conditions D.2.1 and D.2.2, the following conditions shall apply:

- (a) The baghouses DC4 and DC38 for PM and PM10 control shall be in operation at all times when the electric arc furnace EAF2 is in operation.
- (b) The baghouses DC5 and DC42 for PM and PM10 control shall be in operation at all times

when the electric arc furnace EAF3 is in operation.

- (c) The baghouses DC40 and DC42 for PM and PM10 control shall be in operation at all times when the electric arc furnace EAF4 is in operation.
- (d) The baghouses DC42 and DC38 for PM and PM10 control shall be in operation at all times while oxygen lancing is conducted.
- (d) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.2.8 Visible Emissions Notations**

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- (a) Visible emission notations of each of the baghouse (DC4, DC38, DC5, DC40, and DC42) stack exhaust(s) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start-up or shut down times.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

#### **D.2.9 Parametric Monitoring**

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The Permittee shall record the pressure drop across the baghouses (DC4, DC38, DC5, DC40, and DC42) used in conjunction with the electric arc furnaces (EAF2, EAF3, and EAF4), at least once per day when the associated electric arc furnace is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the range of 2.0 - 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.2.10 Broken or Failed Bag Detection

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For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

#### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### D.2.11 Record Keeping Requirements

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- (a) In order to document compliance with Condition D.2.8, the Permittee shall maintain records of the visible emission notations of each of the electric arc furnace stack exhausts once per day.
- (b) In order to document compliance with condition D.2.9 the Permittee shall maintain records of the pressure drop once per day during normal operation when venting to the atmosphere.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.3

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

The pouring, cooling, and shakeout operations consisting of the following:

- (a) One (1) pouring/casting operation, identified as POUR, constructed in or before 1951 with a maximum capacity of 20 tons of melted steel per hour and 183.68 tons of sand per hour with emissions uncontrolled.
- (b) One (1) casting cooling operation, identified as POUR, constructed in or before 1951 with a maximum capacity of 20 tons of melted steel per hour and 183.68 tons of sand per hour with emissions uncontrolled.
- (c) One (1) pouring/casting operation, identified as LDL, constructed in 1950, with a maximum capacity of 4.5 tons of melted steel per hour and 24.32 tons of sand per hour with emissions uncontrolled.
- (d) One (1) casting cooling operation, identified as LDL, constructed in 1950, with a maximum capacity of 4.5 tons of melted steel per hour and 24.32 tons of sand per hour with emissions uncontrolled.
- (e) One (1) shakeout system, identified as North Shakeout, constructed in 1958, with a maximum capacity of 2.29 tons of steel per hour and 8 tons of sand per hour with emissions controlled by two (2) baghouses, identified as DC2 and DC3.
- (f) One (1) shakeout system, identified as South Shakeout, constructed in 1965, with a maximum capacity of 57.14 tons of steel per hour and 200 tons of sand per hour with emissions controlled by two (2) baghouses, identified as DC12 and DC9.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.3.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the following conditions shall apply:

- (a) The allowable PM emission rate from the pouring/casting operation identified as POUR shall not exceed 58.7 pounds per hour when operating at a process weight rate of 203.68 tons of metal and sand per hour.
- (b) The allowable PM emission rate from the casting cooling operation identified as POUR shall not exceed 58.7 pounds per hour when operating at a process weight rate of 203.68 tons of metal and sand per hour.
- (c) The allowable PM emission rate from the pouring/casting operation identified as LDL shall not exceed 39.0 pounds per hour when operating at a process weight rate of 28.8 tons of metal and sand per hour.

- (d) The allowable PM emission rate from the casting cooling operation identified as LDL shall not exceed 39.0 pounds per hour when operating at a process weight rate of 28.8 tons of metal and sand per hour.
- (e) The allowable PM emission rate from the baghouse DC2 controlling the North shakeout operation shall not exceed 19.5 pounds per hour when operating at a process weight rate of 10.3 tons of metal and sand per hour.
- (f) The allowable PM emission rate from the baghouses DC12 and DC9 controlling the South shakeout operation shall not exceed 61.3 pounds per hour when operating at a process weight rate of 257 tons of metal and sand per hour.

The pounds per hour limitations for (c), (d), and (e) were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

The pounds per hour limitations for (a), (b), and (f) were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate greater than 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.3.2 PM10 Emission Credits [326 IAC 2-2]

Pursuant to PSD Significant Source Modification Number 045-12788-00002 issued on June 13, 2001, and in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules) not applicable for the new Airset mold line for PM10, the PM10 emission credits must be made federally enforceable; therefore, the following requirements shall apply.

- (a) The amount of metal throughput to the mold line identified as POUR shall not exceed 34,304.8 tons per 12 consecutive month period.
- (b) The PM10 emissions from the pouring/casting operation identified as POUR shall not exceed 0.22 pounds per ton of metal throughput.
- (c) The PM10 emissions from the castings cooling operation identified as POUR shall not exceed 0.22 pounds per ton of metal throughput.
- (d) The PM10 emissions from the baghouses identified as DC12 and DC9 controlling the shakeout system identified as the South shakeout, shall not exceed a combined total of 0.02 pounds per ton of metal throughput.

#### D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each baghouse listed in this section.

## Compliance Determination Requirements

### D.3.4 Particulate Matter

---

In order to comply with the requirements of Conditions D.3.1 and D.3.2, the following conditions shall apply:

- (a) The baghouses, DC2 and DC3, for PM and PM10 control shall be in operation at all times when the North Shakeout system is in operation.
- (b) The baghouses DC12 and DC9 for PM and PM10 control shall be in operation at all times when the South Shakeout system is in operation.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

### D.3.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

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Within 60 days after the Airset line achieves maximum production rate, but no later than 180 days after initial start-up of the Airset line, the Permittee shall perform PM10 emissions testing on the baghouses DC12 and DC9 used to control the South shakeout system, and the pouring/casting and castings cooling operations associated with the mold line identified as POUR. Testing shall be conducted using methods as approved by the Commissioner, in order to demonstrate compliance with Conditions D.3.2. The tests on the baghouses shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable and condensable PM10.

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.3.6 Visible Emissions Notations

---

- (a) Visible emission notations of each of the controlled stack exhaust(s) shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start-up or shut down times.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

#### D.3.7 Parametric Monitoring

---

The Permittee shall record the pressure drop across each of the baghouses used in conjunction with either of the shakeout systems, at least once per day when the associated shakeout system is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the range of 2.0 - 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Response to Excursions and Exceedances, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.3.8 Broken or Failed Bag Detection

---

For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.3.9 Record Keeping Requirements

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- (a) In order to document compliance with Condition D.3.6, the Permittee shall maintain records of visible emission notations of the shakeout system stack exhaust(s) once per day.
- (b) In order to document compliance with condition D.3.7, the Permittee shall maintain records of the pressure drop once per day during normal operation when venting to the atmosphere.
- (c) To document compliance with Condition D.3.2, the Permittee shall maintain records of the metal throughputs to the POUR line. These records shall be complete and sufficient to establish compliance with the emission limits established in D.3.2.
- (d) To document compliance with Condition D.3.2(e), the Permittee shall maintain records of the following
  - (1) all times when the south shakeout is in operation and
  - (2) all times when any one of the Airset shakeout units is in operation.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.3.10 Reporting Requirements

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Quarterly summaries of the information to document compliance with Condition D.3.2(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The reports submitted by the Permittee do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.4

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

One (1) magnesium treatment operation for the production of ductile iron, identified as DCTLE, constructed in 1987, with a maximum capacity of 4.5 tons of iron per hour with emissions uncontrolled.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.4.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the magnesium treatment process identified as DCTLE shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons of iron per hour. The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.4.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable, the following conditions shall apply:

- (a) The amount of iron throughput to the magnesium ductile treatment (DCTLE) operation shall not exceed 26,630 tons of iron per 12 consecutive month period.
- (b) The PM emissions from the magnesium ductile treatment operation (DCTLE) shall not exceed 1.80 pounds per ton of iron throughput.

Therefore, the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 do not apply.

### Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.4.3 Record keeping Requirements

- (a) In order to document compliance with Condition D.4.2(a), the Permittee shall maintain records of the metal throughput to the magnesium ductile treatment process in tons of iron per month.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.4.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.2(a) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.5

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The shot blasting operations consisting of the following:

- (a) Two (2) twin table blast machines, identified as L3/4 - NTT and L3/4 - STT, both constructed in 1961 each with a maximum capacity of 25 tons of steel per hour with emissions from L3/4 - NTT controlled by baghouse DC16 and emissions from L3/4 - STT controlled by baghouse DC18.
- (b) One (1) Nelle Belle shotblast machine, identified as Nelle, constructed in 1955 with a maximum capacity of 60 tons of steel per hour with emissions controlled by a baghouse, identified as DC7.
- (c) One (1) Wheelabrator Frye shotblast machine, identified as #16 Monorail, constructed in 1976 with a maximum capacity of 25.7 tons of metal per hour with emissions controlled by a baghouse, identified as DC17.
- (d) Two (2) room blast machines, identified as LN3-Rm and LN5-S Rm, constructed in 1962 and 1967, respectively, with a maximum capacity of 8 tons of steel per hour each with emissions from LN3-RM controlled by baghouse DC30 and emissions from LN5-S Rm controlled by baghouse DC28.
- (e) One (1) room blast machine, identified as LN5-N, constructed in 1960 with a maximum capacity of 10 tons of steel per hour with emissions controlled by a baghouse, identified as DC11.
- (f) One (1) room blast machine, identified as LN2-N, constructed in 1981 with a maximum capacity of 13 tons of steel per hour with emissions controlled by a baghouse, identified as DC23.
- (g) One (1) tumble blast machine, identified as LN1-TMBL, constructed in 1945 with a maximum capacity of 4.5 tons of steel per hour with emissions controlled by a baghouse, identified as DC10.
- (h) One (1) blast machine, identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC8.
- (i) One (1) monorail blast machine, identified as #18 Monorail, constructed in 1980 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC21.
- (j) One (1) room blast machine, identified as LN2-S Rm, constructed in 1979 with a maximum capacity of 7 tons of steel per hour with emissions controlled by a baghouse, identified as DC33.
- (k) One (1) chill room tumble blast machine, identified as Chill Tmbl, constructed July 1, 1977, with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (l) One (1) chill room cabinet blast machine, identified as Chill Cbnt, constructed in 1978 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (m) One (1) pangborn rotoblast machine identified as LN2-T, to be constructed by 2005 with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.5.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the following conditions shall apply:

- (a) The allowable PM emission rate from each of the baghouses DC16 and DC18 controlling the shotblast machines identified as the twin table shotblast machines L3/4-NTT and L3/4-STT, shall not exceed 35.4 pounds per hour each when operating at a process weight rate of 25 tons of metal castings per hour each.
- (b) The allowable PM emission rate from the baghouse DC7 controlling the shotblast machine identified as the Nelle Belle shotblast machine (Nelle) shall not exceed 46.3 pounds per hour when operating at a process weight rate of 60 tons of metal castings per hour.
- (c) The allowable PM emission rate from the baghouse DC17 controlling the shotblast machine identified as the Wheelabrator Frye shotblast machine (#16 Monorail) shall not exceed 36.1 pounds per hour when operating at a process weight rate of 25.7 tons of metal castings per hour.
- (d) The allowable PM emission rate from each of the baghouses DC30 and DC28 controlling the shotblast machines identified as the room blast shotblast machines LN3-Rm and LN5-S Rm, shall not exceed 16.5 pounds per hour when operating at a process weight rate of 8 tons of metal castings per hour each.
- (e) The allowable PM emission rate from the baghouse DC11 controlling the shotblast machine identified as the room blast shotblast machine LN5-N shall not exceed 19.2 pounds per hour when operating at a process weight rate of 10 tons of metal castings per hour.
- (f) The allowable PM emission rate from the baghouse DC23 controlling the shotblast machine identified as the room blast shotblast machine LN2-N shall not exceed 22.9 pounds per hour when operating at a process weight rate of 13 tons of metal castings per hour.
- (g) The allowable PM emission rate from the baghouse DC10 controlling the shotblast machine identified as the tumble blast shotblast machine LN1-TMBL shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons of metal castings per hour.
- (h) The allowable PM emission rate from the baghouse DC8 controlling the shotblast machine identified as the LN7-3 wheel blast shall not exceed 35.4 pounds per hour when operating at a process weight rate of 25 tons of metal castings per hour.
- (i) The allowable PM emission rate from the baghouse DC21 controlling the shotblast machine identified as the #18 monorail shotblast machine shall not exceed 20.9 pounds per hour when operating at a process weight rate of 11.4 tons of metal castings per hour.
- (j) The allowable PM emission rate from the baghouse DC33 controlling the shotblast machine identified as the room blast shotblast machine LN2-S Rm shall not exceed 15.1 pounds per hour when operating at a process weight rate of 7 tons of metal castings per hour.
- (k) The allowable PM emission rate from the baghouse DC6 controlling the shotblast machines identified as the chill room tumble blast shotblast machine (Chill TmbL) and the chill room cabinet blast shotblast machine (Chill Cbnt) shall not exceed 33.3 pounds per hour when operating at a combined process weight rate of 22.8 tons of metal castings per hour.
- (l) The allowable PM emission rate from the baghouse DC22 controlling the shotblast machine identified as LN2-T rotoblast shall not exceed 13.62 pounds per hour when operating at a process weight rate of 6 tons of metal castings per hour.

The pounds per hour limitations for (a), and (c) through (l) above were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

The pounds per hour limitation for (b) above was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate greater than 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.5.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable, the following conditions shall apply:

- (a) The PM emissions from the baghouse DC23 controlling the LN2-N shot blast machine shall not exceed 5.48 pounds per hour.
- (b) The PM emissions from the baghouse DC21 controlling the #18 Monorail shot blast machine shall not exceed 5.48 pounds per hour.
- (c) The PM emissions from the baghouse DC33 controlling the LN2-S Rm shot blast machine shall not exceed 5.48 pounds per hour.
- (d) The PM emissions from the baghouse DC6 controlling the Chill room tumble blast shot blast machine (Chill Tmbl) and the Chill room cabinet blast shotblast machine (Chill Cbnt) shall not exceed 5.48 pounds per hour.
- (e) The PM emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 4.50 pounds per hour.
- (f) The PM emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 1.18 pounds per hour.
- (g) The  $PM_{10}$  emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 2.70 pounds per hour.
- (h) The  $PM_{10}$  emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 0.70 pounds per hour.

Therefore, the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 shall not apply.

#### D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each of the control devices listed in this section.

## Compliance Determination Requirements

### D.5.4 Particulate Matter

In order to comply with the requirements of Conditions D.5.1 and D.5.2, the following conditions shall apply:

- (a) The baghouse, DC16, for PM and PM10 control shall be in operation at all times when the L3/4-NTT shot blast machine is in operation.
- (b) The baghouse, DC18, for PM and PM10 control shall be in operation at all times when the L3/4-STT shot blast machine is in operation.
- (c) The baghouse, DC7, for PM and PM10 control shall be in operation at all times when the Nelle Belle shot blast machine is in operation.
- (d) The baghouse, DC17, for PM and PM10 control shall be in operation at all time when the Wheelabrator Frye shot blast machine is in operation.
- (e) The baghouse, DC30, for PM and PM10 control shall be in operation at all times when the LN3-Rm shot blast machine is in operation.
- (f) The baghouse, DC28, for PM and PM10 control shall be in operation at all times when the LN5-SRm shot blast machine is in operation.
- (g) The baghouse, DC11, for PM and PM10 control shall be in operation at all times when the LN5-N shot blast machine is in operation.
- (h) The baghouse, DC23, for PM and PM10 control shall be in operation at all times when the LN2-N shot blast machine is in operation.
- (i) The baghouse, DC10, for PM and PM10 control shall be in operation at all times when the LN1-TMBL shot blast machine is in operation.
- (j) The baghouse, DC8, for PM and PM10 control shall be in operation at all times when the LN7-3 shot blast machine is in operation.
- (k) The baghouse, DC21, for PM and PM10 control shall be in operation at all times when the #18 Monorail shot blast machine is in operation.
- (l) The baghouse, DC33, for PM and PM10 control shall be in operation at all times when the LN2-S Rm shot blast machine is in operation.
- (m) The baghouse, DC6, shall be in operation at all times when the Chill TmbI and Chill Cbnt shot blast machines are in operation.
- (n) The baghouse, DC22, for PM and PM10 control shall be in operation at all times when the LN2-T shot blast machine is in operation.
- (o) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.5.5 Visible Emissions Notations**

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- (a) Visible emission notations of each of the shot blasting machines stack exhausts shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start-up or shut down times.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

### **D.5.6 Parametric Monitoring**

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The Permittee shall record the pressure drop across each of the baghouses used in conjunction with the shot blasting machines, at least once per day when the shot blasting machines are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouses-DC11 and DC30 is outside the range of 0.2 - 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. When for any one reading, the pressure drop across each of the other baghouses listed in this section is outside the range of 2.0 - 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

### **D.5.7 Broken or Failed Bag Detection**

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For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Compliance with the above compliance monitoring requirement shall assure compliance with 40 CFR 64 requirements for Shot Blast Machine, identified as LN7-3, and controlled by baghouse, identified as DC-8.

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**D.5.8 Record Keeping Requirements**

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- (a) In order to document compliance with Condition D.5.5, the Permittee shall maintain records of visible emission notations of the shot blasting machines stack exhaust(s) once per day.
- (b) In order to document compliance with condition D.5.6, the Permittee shall maintain records of the pressure drop across each baghouse once per day.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.6

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

- (a) One (1) sand handling system, identified as North Sand Handling System, constructed in 1988 and modified in 1994 with a maximum capacity of 8 tons of sand per hour with emissions controlled by a baghouse, identified as DC41.
- (b) One (1) sand handling, identified as South Sand Handling System, constructed in 1967 and modified in 1988 with a maximum capacity of 200 tons of sand per hour with emissions controlled by four (4) baghouses, identified as DC20, DC35, DC36, and DC39.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.6.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the following conditions shall apply:

- (a) The allowable PM emission rate from the baghouse DC41 controlling the North sand handling system shall not exceed 16.5 pounds per hour when operating at a process weight rate of 8 tons of sand per hour.
- (b) The allowable PM emission rate from the baghouses DC20, DC35, DC36, and DC39 controlling the South sand handling system shall not exceed 58.5 pounds per hour (total for all four baghouses) when operating at a process weight rate of 200 tons of sand per hour.

The pounds per hour limitation for (a) was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

The pounds per hour limitation for (b) was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate greater than 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.6.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the following condition shall apply:

- (a) The PM emissions from the baghouse DC41 controlling the North Sand Handling System shall not exceed 0.072 pound per ton of sand.

- (b) The PM-10 emissions from the baghouse DC41 controlling the North Sand Handling System shall not exceed 0.39 pounds per ton of sand.
- (c) The sand throughput to the North sand handling system shall not exceed 72,000 tons per 12 consecutive month period with compliance determined at the end of each month.
- (d) The PM emissions from the baghouses DC20, DC35, DC36, and DC39 controlling the South Sand Handling System shall not exceed 0.072 pound per ton of sand (total for all four baghouses combined).
- (e) The sand throughput to the South sand handling system shall not exceed 22,000 tons per 12 consecutive month period with compliance determined at the end of each month.
- (f) The PM10 emissions from the baghouses DC20, DC35, DC36, and DC39 controlling the South Sand Handling System shall not exceed 0.005 pound per ton of sand (total for all four baghouses combined).

Therefore, the requirements of 326 IAC 2-2 (PSD) shall not apply. Compliance with (e) and (f) of this condition are necessary in order that the requirements of 326 IAC 2-2 (PSD) shall not apply to the new Airset mold line, as described in Section D.8 of this permit.

#### **D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each of the baghouses listed in this section.

### **Compliance Determination Requirements**

#### **D.6.4 Particulate Matter**

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In order to comply with the requirements of Conditions D.6.1 and D.6.2, the following conditions shall apply:

- (a) The baghouse, DC41, for PM and PM10 control shall be in operation at all times when the North Sand Handling System is in operation.
- (b) The baghouses DC20, DC35, DC36, and DC39 for PM and PM10 control shall be in operation at all times when the South Sand Handling System is in operation.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

#### **D.6.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]**

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Within 60 days after the Airset line achieves maximum production rate, but no later than 180 days after startup of the Airset line, the Permittee shall perform PM and PM10 emissions testing on the baghouses DC20, DC35, DC36, and DC39 used to control the South sand handling system using methods as approved by the Commissioner, in order to demonstrate compliance with Conditions D.6.1 and D.6.2. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable and condensable PM10.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.6.6 Visible Emissions Notations**

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- (a) Visible emission notations of North Sand Handling System stack exhausts and the South sand handling system stack exhausts shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start-up or shut down times.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

### **D.6.7 Parametric Monitoring**

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The Permittee shall record the pressure drop across the baghouses DC41, DC20, DC35, DC36, and DC39 used in conjunction with the sand handling systems, at least once per day when the sand handling systems are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the range of 2.0 - 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

### **D.6.8 Broken or Failed Bag Detection**

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For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

## **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.6.9 Record Keeping Requirements**

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- (a) In order to document compliance with Condition D.6.6, the Permittee shall maintain records of visible emission notations of the sand handling systems stack exhausts once per day.
- (b) In order to document compliance with condition D.6.7, the Permittee shall maintain records of the pressure drop once per day during normal operation when venting to the atmosphere.
- (c) In order to document compliance with Condition D.6.2(c) and (e), the Permittee shall maintain records of the sand throughputs to the North and South sand handling systems in tons of sand per month.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

### **D.6.10 Reporting Requirements**

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A quarterly summary of the information to document compliance with Condition D.6.2(c) and (e) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.7

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

Core and mold making operations consisting of the following:

- (a) One (1) Isocure core making machine, equipped with a mixer, identified as Isocure, constructed in 1995 with a maximum capacity of 4.5 tons of sand per hour equipped with a scrubber to control TEA emissions and with a one ton new sand storage hopper and a seven (7) ton new sand storage hopper.
- (b) One (1) Airset core making machine, identified as Pep Core, constructed in 1989 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled. The Airset core making system consists of two (2) core sand mixers, one constructed in 1989 and the other to be constructed in 2005, with maximum capacities of 9 tons of sand per hour and 6 tons of sand per hour, respectively.
- (c) One (1) Pepset mold making machine, constructed in 1994 with a maximum capacity of 45 tons of sand per hour with emissions uncontrolled.
- (d) One (1) Oil core making machine, identified as Red CO<sub>2</sub>, constructed in 1988 with a maximum capacity of 0.05 tons of sand per hour with emissions uncontrolled.
- (e) One (1) Airset core making machine equipped with a mixer, identified as Zircon, constructed in 1992 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled.
- (f) Five (5) Oil Sand core making benches, constructed in 1959, each with a maximum capacity of 0.4 tons of oil sand per hour or 0.6 tons of CO<sub>2</sub> sand per hour.
- (g) Two (2) Shell core making machines, constructed in 1962 and 1973, each with a maximum capacity of 0.075 tons of sand per hour.
- (h) One (1) Shell core making machine, constructed in 1976, with a maximum capacity of 0.125 tons of sand per hour.
- (i) One (1) Airset core making machine, constructed in 1976, with a maximum capacity of 16.5 tons of sand per hour.
- (j) One (1) core wash process, constructed prior to 1977, with emissions uncontrolled and exhausting internally.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.7.1 VOC Emissions [326 IAC 8-1-6] [326 IAC 2-2]

The Isocure core making machine and the Pepset mold making machine each have potential emissions of VOC greater than 40 tons per year, therefore, in order to render the requirements of 326 IAC 8-1-6 (BACT) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the following conditions shall apply:

- (a) The scrubber controlling the Isocure core machine shall be in operation at all times when the core machine is in operation.

- (b) The VOC/TEA emissions from the scrubber controlling the TEA gas emissions from the Isocure core making machine shall not exceed 2.54 pound per hour.
- (c) The uncontrolled VOC emissions from the Isocure core making machine and mixer shall not exceed 5.43 pounds per hour.
- (d) The VOC emissions from the Pepset mold making machine shall not exceed 5.48 pounds per hour.
- (e) The sand throughput to the Pepset mold making machine shall not exceed 73,846.8 tons per 12 consecutive month period.
- (f) The total resin usage for the Airset core making machine sand mixer, constructed in 2005, shall be limited to less than 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. This is equivalent to VOC emissions of less than 25 tons per year.
- (g) The VOC emissions from the Airset core making machine sand mixer shall not exceed 0.05 pounds of VOC per pound of core resin.

Therefore, the requirements of 326 IAC 8-1-6 (BACT) shall not apply. Compliance with above limits will also render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

#### **D.7.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the scrubber.

### **Compliance Determination Requirements**

#### **D.7.3 VOC Control**

In order to comply with the requirements of Condition D.7.1, the scrubber for VOC (TEA) emissions control shall be in operation at all times when the Isocure core machine is in operation.

#### **D.7.4 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]**

Within 36 months after issuance of this permit, the Permittee shall perform VOC (TEA) emissions testing on the scrubber used to control the Isocure core machine using methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.7.1. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.7.5 Parametric Monitoring**

The Permittee shall monitor and record the acid content, pressure drop, and flow rate of the scrubber, at least once per day when the associated Isocure core machine is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the scrubber is outside the range of 2.0 and 6.0 inches of water, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. When for any one reading, the flow rate of the scrubber is less than 120 gallons per minute, or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. When for any one reading, the acid content of each of the scrubbers is greater than a pH level of 2, or an acid content established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

The instruments used for determining the pressure, flow rate, and pH level shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.7.6 Failure Detection

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In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a violation of this permit.

### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.7.7 Record Keeping Requirements

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- (a) In order to document compliance with condition D.7.5, the Permittee shall maintain records of the following operational parameters for the scrubber once per day during normal operation:
  - (1) pressure drop;
  - (2) flow rate; and
  - (3) acid content (pH level).
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.7.8 Reporting Requirements

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A quarterly summary of the information to document compliance with Conditions D.7.1(e) and D.7.1(f) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.8

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

One (1) new Airset molding line rated at a maximum steel production rate of 15.73 tons of steel or iron per hour and 47.2 tons of sand per hour. The Airset molding line consists of the following processes/equipment:

- (a) pouring operations with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with emissions uncontrolled and exhausting through stacks S37through S42;
- (b) castings cooling operations with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with emissions uncontrolled and exhausting through stacks S37through S42;
- (c) shakeout operations with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with particulate emissions controlled by one (1) baghouse, identified as DC12, and exhausting to stack DC12;
- (d) sand handling operations with a maximum capacity of 47.2 tons of sand per hour, with emissions controlled by a baghouse identified as DC46, and exhausting to stack DC46. The sand handling system consists of the following equipment:
  - (1) six sand storage silos, each controlled by a bin vent;
  - (2) four (4) sand heaters;
  - (3) covered pneumatic conveyors for transporting sand from silos to mixer;
- (e) mechanical reclaim operations with a maximum capacity of 47.2 tons of sand per hour, with emissions controlled by a baghouse identified as DC45 and exhausting to stack DC45;
- (f) one natural gas fired thermal reclaimer, with a maximum heat input capacity of 2.83 million Btu per hour, with a maximum capacity of 2.85 tons of sand per hour, with emissions controlled by a baghouse identified as DC46 and exhausting to stack DC46;
- (g) phenolic urethane no-bake mold making operations with a maximum capacity of 47.2 tons of sand per hour. The mold making operation consists of the following equipment.
  - (1) one enclosed mixer for combining mold sand with resin, with VOC emissions controlled by the thermal sand reclaimer;
  - (2) strike off operations;
  - (3) rollover draw/strip operations;
  - (4) one natural gas fired preheat tunnel with a maximum heat input capacity of 0.8 million Btu per hour;
  - (5) mold wash operations with a maximum capacity of 230.69 pounds of mold wash per hour, which is equivalent to 11.34 gallons of mold wash per hour;
  - (6) one natural gas fired drying (curing) oven, with a maximum heat input capacity of 3.2 million Btu per hour; and
  - (7) one mold closer process which puts the two halves of the mold together.

Note: Each individual shakeout unit has a maximum design capacity of 10 tons of metal per hour; however, the pouring and cooling operations bottleneck the shakeout process, such that the total hourly rate at shakeout cannot exceed 15.73 tons of metal per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.8.1 BACT for VOC [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6] [326 IAC 2-4.1-1]

Pursuant to 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules) and 326 IAC 8-1-6 (BACT), and in order to render the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) not applicable to the new Airset line, the Permittee shall comply with the following BACT requirements:

- (a) The VOC emissions from the pouring/casting and castings cooling operations shall be limited to 1.40 pounds per ton of metal poured and 8.85 pounds per hour, and the resin content shall not exceed 1.23% by weight.
- (b) The VOC emissions from the Airset molding line shakeout operations shall be limited to 3.32 pounds per ton of metal and 21.0 pounds per hour.
- (c) The metal throughput to this new Airset mold line shall not exceed 55,400 tons per 12 consecutive month period.
- (d) The VOC emissions from the mold making process shall be limited to 1.17 pounds per ton of sand and 22.20 pounds per hour.
- (e) The VOC content of the mold wash shall not exceed 0.0 percent by weight.
- (f) The mold production shall not exceed 166,200 tons per 12 consecutive month period and the binder usage shall not exceed 1,662 tons per 12 consecutive month period.
- (g) The VOC emissions from the thermal sand reclamation system, which controls the mold sand mixer, shall not exceed 2.2 pounds per hour.
- (h) The thermal sand reclamation system shall control VOC emissions from the mixer and achieve a minimum of 98% destruction efficiency.
- (i) The maximum throughput rate to the shakeout process shall not exceed 15.73 tons of metal per hour.

Therefore, the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) shall not apply to the mold making process. Compliance with the requirements of this condition will also satisfy the requirements of 326 IAC 8-1-6 (BACT).

#### D.8.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the following conditions shall apply:

- (a) The allowable PM emission rate from the pouring/casting and castings cooling process shall not exceed 46.7 pounds per hour each when operating at a process weight rate of 15.73 tons of metal per hour each and 47.2 tons of sand per hour each, for a total process weight rate of 62.9 tons per hour each.
- (b) The allowable PM emission rate from the baghouse DC12 controlling the shakeout process shall not exceed 46.7 pounds per hour when operating at a process weight rate of 15.73 tons of metal per hour and 47.2 tons of sand per hour, for a total process weight rate of 62.9 tons per hour. The baghouse identified as DC12 shall be in operation at all times the shakeout process is in operation, in order to comply with this limit.
- (c) The allowable PM emission rate from the baghouse DC46 controlling the sand handling process and the thermal reclaiming process shall not exceed 44.0 pounds per hour when operating at a process weight rate of 47.2 tons of sand per hour. The baghouse identified as DC46 shall be in operation at all times the sand handling process is in operation, in order to comply with this limit.
- (d) The allowable PM emission rate from the baghouse DC45 controlling the mechanical reclaim process shall not exceed 44.0 pounds per hour when operating at a process weight rate of 47.2 tons of sand per hour.

The pounds per hour limitations were calculated using the following equation:

Interpolation and extrapolation of the data for the process weight rate greater than 60,000 pounds per hour shall be accomplished by use of the equations:

$$E = 55 P^{0.11} - 40$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

#### D.8.3 PM and PM10 Emissions [326 IAC 2-2]

---

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules) not applicable for PM and PM10, the Permittee shall comply with the following requirements:

- (a) At least 99% of all particulate matter (PM and PM-10,) emissions generated during sand handling, mechanical reclaim, and thermal reclaim operations shall be captured by a baghouse and controlled such that visible emissions from any building opening shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).
- (b) At least 96% of all particulate matter (PM and PM-10,) emissions generated during shakeout operations shall be captured by a baghouse and controlled such that visible emissions from any building opening shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).
- (c) The PM emissions from the baghouse DC12 controlling the shakeout operations shall be limited to a total of 0.25 pounds per ton of metal throughput. Compliance with this limit will also satisfy the requirements of Condition D.8.2.
- (d) The PM10 emissions from the baghouse DC12 controlling the shakeout operations shall be limited to a total of 0.3 pounds per ton of metal throughput.
- (e) At no time shall the south shakeout process be in operation at the same time when any one of the Airset shakeout units is in operation.
- (f) The PM emissions from the baghouse DC46 controlling the Airset sand handling operations and the thermal reclaimer shall be limited to 0.008 pounds per ton of sand throughput to the Airset sand handling system. Compliance with this limit will also satisfy the requirements of Condition D.8.2.
- (g) The PM10 emissions from the baghouse DC46 controlling the sand handling operations and the thermal reclaimer shall be limited to 0.008 pounds per ton of sand throughput.
- (h) The sand throughput to the thermal sand reclamation system shall not exceed 24,930 tons per 12 consecutive month period.
- (i) The sand throughput to the sand handling system shall not exceed 166,200 tons per 12 consecutive month period.
- (j) The PM emissions from the baghouse DC45 controlling the mechanical reclaimer shall be limited to 0.008 pounds per ton of sand throughput. Compliance with this limit will also satisfy the requirements of Condition D.8.2.
- (k) The PM10 emissions from the baghouse DC45 controlling the mechanical reclaimer shall be limited to 0.008 pounds per ton of sand throughput.
- (l) The PM emissions from the pouring/casting process shall be limited to 0.2 pounds per ton of metal throughput. Compliance with this limit will also satisfy the requirements of Condition D.8.2.

- (m) The PM<sub>10</sub> emissions from the pouring/casting process shall be limited to 0.07 pounds per ton of metal throughput.
- (n) The PM emissions from the castings cooling process shall be limited to 0.2 pounds per ton of metal throughput. Compliance with this limit will also satisfy the requirements of Condition D.8.2.
- (o) The PM<sub>10</sub> emissions from the castings cooling process shall be limited to 0.07 pounds per ton of metal throughput.

Therefore, the requirements of 326 IAC 2-2 and 40 CFR 52.21 (PSD) will not apply for PM and PM<sub>10</sub> emissions.

#### **D.8.4 Lead Emissions [326 IAC 2-2] [326 IAC 2-4.1-1]**

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In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules) not applicable for lead, the Permittee shall comply with the following requirements.

- (a) The combined lead emissions from the Airset pouring/casting and castings cooling operations shall be limited to 0.13 pounds per hour.
- (b) Lead emissions from the Airset mold line shall be minimized in accordance with the attached Scrap Management Program (Attachment A).

Therefore, the requirements of 326 IAC 2-2 and 40 CFR 52.21 (PSD) will not apply for lead emissions.

#### **D.8.5 HAPs Emissions [326 IAC 2-4.1-1]**

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In order to render the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) (PSD) Rules) not applicable, the metallic HAP emissions from the Airset mold line shall be minimized in accordance with the attached Scrap Management Program (Attachment A). Therefore, the requirements of 326 IAC 2-4.1.1 (New Source Toxics Control) shall not apply to the Airset mold line.

#### **D.8.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the baghouse DC12 controlling the shakeout operations, baghouse DC45 controlling the mechanical reclaimer, the thermal reclaimer and the baghouse DC46 controlling the thermal reclaimer, and the five bin vents controlling the six sand silos.

### **Compliance Determination Requirements**

#### **D.8.7 Particulate Matter Controls (PM/PM<sub>10</sub>)**

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In order to comply with the limits in Conditions D.8.2, D.8.3, D.8.4, and D.8.5, the following conditions shall apply:

- (a) The baghouse DC12 for particulate control shall be in operation and control emissions from the shakeout operation at all times that the shakeout process is in operation.
- (b) The baghouse DC45 for particulate control shall be in operation and control emissions from the mechanical reclaimer at all times that the mechanical reclaimer is in operation.
- (c) The baghouse DC46 for particulate control shall be in operation and control emissions from the thermal reclaimer and the sand handling system at all times that the thermal reclaimer or the sand handling system is in operation.
- (d) The bin vents for particulate control shall be in place and control emissions from each of

- the six sand silos at all times that sand is being transferred into or out of the silos.
- (e) All conveyors associated with the sand handling system, mechanical reclamation system, and thermal reclamation system shall be completely enclosed.
- (f) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

#### D.8.8 Volatile Organic Compound (VOC) Controls

In order to comply with D.8.1(g), the thermal sand reclaimer for VOC control shall be in operation and control emissions from the sand mixer at all times that the mixing process is in operation. When operating, the thermal reclamation system shall maintain a minimum operating temperature of 1400 °F during operation or a temperature and fan amperage as determined from the most recent compliant stack test, as approved by IDEM.

#### D.8.9 Volatile Organic Compounds (VOC) Content and Usage Limitations

Compliance with the VOC content and usage limitations contained in Conditions D.8.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the mold wash solvent manufacturer.

#### D.8.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up the Permittee shall perform VOC testing from the thermal sand reclaimer controlling the sand mixer, the using methods as approved by the Commissioner, in order to demonstrate compliance with Conditions D.8.1(g) and (h). The test on the thermal sand reclaimer controlling the mixer shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up the Permittee shall perform VOC testing from the Airset pouring, cooling, and shakeout operations, using methods as approved by the Commissioner, in order to demonstrate compliance with Conditions D.8.1(a) and (b). Testing shall be conducted in accordance with Section C - Performance Testing.
- (c) Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up the Permittee shall perform PM and PM10 testing from the facilities as shown in the table below.

Facility Identification	Control Device Identification
Airset shakeout units (both units)	baghouse DC12
Airset sand handling system and thermal reclaimer	baghouse DC46
Airset mechanical reclaimer	baghouse DC45
Airset pouring/casting operations	no controls
Airset castings cooling operations	no controls

Testing shall be conducted using methods as approved by the Commissioner, in order to demonstrate compliance with Conditions D.8.2 and D.8.3. The tests on the baghouses shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable and condensable PM10.

- (d) Any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-6 (Source Sampling Procedures).

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

##### **D.8.11 Visible Emissions Notations**

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- (a) Visible emission notations of the baghouses DC12, DC45, and DC46 stack exhausts shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

##### **D.8.12 Parametric Monitoring**

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The Permittee shall record the pressure drop across the baghouses DC12, DC45, and DC46 used in conjunction with the shakeout, sand handling, mechanical reclamation, and thermal reclamation processes, at least once per day when these processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the range of 2.0 - 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

The instruments used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

##### **D.8.13 Broken or Failed Bag Detection**

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For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

#### D.8.14 Thermal Reclaimer Monitoring

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- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal sand reclamation system for measuring the operating temperature. The output of this system shall be recorded, and that temperature shall be greater than or equal to 1400 degrees Fahrenheit or the temperature used to demonstrate compliance during the most recent compliance stack test, as approved by IDEM.
- (b) The duct pressure or fan amperage shall be observed at least once per day when the thermal sand reclaimer is in operation. This pressure or amperage shall be maintained within the range specified by the manufacturer or a range as established in the most recent compliant stack test, as approved by IDEM.
- (c) The Permittee shall take the troubleshooting contingency and response steps in accordance with Section C – Response to Excursions and Exceedances when the reading is outside the above mentioned range for any one reading. Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances, shall be considered a violation of this permit.

#### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.8.15 Record Keeping Requirements

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- (a) To document compliance with Condition D.8.11, the Permittee shall maintain records of visible emission notations of the baghouses DC12, DC45, and DC46 stack exhausts once per day.
- (b) To document compliance with Condition D.8.12, the Permittee shall maintain once per day records of the inlet and outlet differential pressure.
- (c) To document compliance with Condition D.8.1 and D.8.3, the Permittee shall maintain records of the metal and sand throughputs to this new Airset mold line. These records shall be complete and sufficient to establish compliance with the emission limits established in D.8.1 and D.8.3.
- (d) To document compliance with Conditions D.8.1, D.8.8, and D.8.16, the Permittee shall maintain records in accordance with (1) and (2) below.
  - (1) The continuous temperature records for the thermal reclaimer and the temperature used to demonstrate compliance during the most recent compliance stack test.
  - (2) Records of the duct pressure or fan amperage once per day.
- (e) In order to document compliance with Conditions D.8.1, the Permittee shall maintain records in accordance with (1) through (4) below.
  - (1) Copies of the Material Safety Data Sheets for each mold wash material used at the Airset mold line;
  - (2) The amount of binder usage in the Airset mold line, each month of operation;
  - (3) The sand throughput to the thermal sand reclaimer, each month of operation; and
  - (4) The percent by weight resin content of the Airset line pouring/cooling operation.
- (f) In order to document Compliance with Condition D.8.3 (e), the Permittee shall keep

records of the following:

- (1) all times when the south shakeout is in operation and
- (2) all times when any one of the Airset shakeout units is in operation.

#### D.8.16 Reporting Requirements

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- (a) Quarterly summaries of the information to document compliance with Conditions D.8.1 and D.8.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.
- (b) The reports submitted by the Permittee do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.9

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

Insignificant activities including the following:

- (a) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (b) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume.
- (c) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
  - (1) Grinding machines each with a maximum capacity of 18.9 pounds per hour with emissions controlled by baghouses, identified as DC13, DC14, DC26, and DC37.
  - (2) One (1) pattern woodworking shop with emissions controlled by a roto-clone, identified as DC1.
- (d) Flame cutting - natural gas and oxygen torch to remove gates, spurs, and risers.
- (e) Flame wash - arc welding like torch to smooth castings after flame cutting.
- (f) One (1) paint booth for coating metal castings, constructed prior to 1977, utilizing air assisted airless spray type, with VOC emissions uncontrolled and overspray controlled by using a filter wall, with emissions exhausting to stack S154.

Mold making operations consisting of the following:

- (g) Four (4) green sand molding machines, identified as #20 Jolt, #8 Jolt, #13 Jolt, and #21 Jolt constructed in 1941, 1929, 1930, and 1996, respectively, each with a maximum capacity of 13 tons of sand per hour.
- (h) One (1) green sand molding machine, identified as Herm Jolt, constructed in 1977 with a maximum capacity of 26 tons of sand per hour with emission uncontrolled.
- (i) Two (2) green sand molding machines, identified as #14 Jolt and #10 Jolt, constructed in 1935 and 1929, respectively, each with a maximum capacity of 8 tons of sand per hour with emissions uncontrolled.

## **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

### **D.9.1 Particulate Matter (PM) [326 IAC 6-3-2]**

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Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from each of the above listed processes shall not exceed the pounds per hour limitations as calculated with the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

## **Compliance Determination Requirements**

### **D.9.2 Particulate Matter Control**

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In order to comply with the requirements of Condition D.9.1, the control devices listed in this section for PM emissions control shall be in operation at all times when the associated facility is in operation.

## SECTION D.10

## FACILITY OPERATION CONDITIONS

### **Facility Description [326 IAC 2-7-5(15)]**

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

One (1) natural gas-fired surface combustion heat treat furnace, identified as L7SC, constructed in 1997 with a maximum capacity of 24.5 million British thermal units per hour with emissions uncontrolled.

There are no additional rules applicable to this facility.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: Harrison Steel Castings Company  
Source Address: 900 North Mound Street, Attica, Indiana 47918  
Mailing Address: P.O. Box 60, Attica, Indiana 47918  
Part 70 Permit No.: T045-6002-00002

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- ☐ Annual Compliance Certification Letter
- ☐ Test Result (specify)
- ☐ Report (specify)
- ☐ Notification (specify)
- ☐ Affidavit
- ☐ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-5674  
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Harrison Steel Castings Company  
Source Address: 900 North Mound Street, Attica, Indiana 47918  
Mailing Address: P.O. Box 60, Attica, Indiana 47918  
Part 70 Permit No.: T045-6002-00002

**This form consists of 2 pages**

**Page 1 of 2**

- 9 This is an emergency as defined in 326 IAC 2-7-1(12)
- C The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
  - C The Permittee must submit notice by mail or facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:

Title / Position:

Date:

Phone:

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Harrison Steel Castings Company  
Source Address: 900 North Mound Street, Attica, Indiana 47918  
Mailing Address: P.O. Box 60, Attica, Indiana 47918  
Part 70 Permit No.: T045-6002-00002  
Facility: Magnesium ductile treatment operation  
Parameter: Metal throughput to treatment operation  
Limit: 26,630 tons per 12 consecutive month period

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
Deviation has been reported on:

Submitted by:  
Title / Position:  
Signature:  
Date:  
Phone:

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Harrison Steel Castings Company  
Source Address: 900 North Mound Street, Attica, Indiana 47918  
Mailing Address: P.O. Box 60, Attica, Indiana 47918  
Part 70 Permit No.: T045-6002-00002  
Facility: North and South sand handling systems  
Parameter: sand throughput to each system  
Limit: 72,000 tons per 12 consecutive month period for the North sand system; and  
22,000 tons per 12 consecutive month period for the South sand system with compliance  
determined at the end of each month

YEAR:  
North Sand System

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

South Sand System

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- 9 No deviation occurred in this quarter.  
9 Deviation/s occurred in this quarter.  
Deviation has been reported on:

Submitted by:  
Title / Position:  
Signature:  
Date:  
Phone:

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Harrison Steel Castings Company  
Source Address: 900 North Mound Street, Attica, Indiana 47918  
Mailing Address: P.O. Box 60, Attica, Indiana 47918  
Part 70 Permit No.: T045-6002-00002  
Facility: Pepset mold making machine  
Parameter: Sand Throughput  
Limit: 73,846.8 tons per 12 consecutive month period

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on:

Submitted by:  
Title / Position:  
Signature:  
Date:  
Phone:

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Harrison Steel Castings Company  
Source Address: 900 North Mound Street, Attica, Indiana 47918  
Mailing Address: P.O. Box 60, Attica, Indiana 47918  
Part 70 Permit No.: T045-6002-00002  
Facility: Airset Core Making Machine Sand Mixer (constructed in 2005)  
Parameter: VOC  
Limit: Total resin usage for the Airset core making machine sand mixer (constructed in 2005) shall be limited to less than 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Resin Usage This Month	Resin Usage Previous 11 Months	Resin Usage 12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on:

Submitted by:  
Title / Position:  
Signature:  
Date:  
Phone:

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Harrison Steel Castings Company  
Source Address: 900 North Mound Street, Attica, Indiana 47918  
Mailing Address: P.O. Box 60, Attica, Indiana 47918  
Part 70 Permit No.: T045-6002-00002

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

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This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☒ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed By:

Title/Position:

Date:

Phone:

Attach a signed certification to complete this report.

## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a PSD Significant Source Modification and PSD Significant Permit Modification to a Part 70 Operating Permit**

#### **Source Background and Description**

<b>Source Name:</b>	<b>Harrison Steel Castings Company</b>
<b>Source Location:</b>	<b>900 North Mound Street, Attica, Indiana 47918</b>
<b>County:</b>	<b>Fountain</b>
<b>SIC Code:</b>	<b>3325, 3321</b>
<b>Operation Permit No.:</b>	<b>T045-6002-00002</b>
<b>Operation Permit Issuance Date:</b>	<b>November 30, 2001</b>
<b>Significant Source Modification No.:</b>	<b>045-20845-00002</b>
<b>Significant Permit Modification No.:</b>	<b>045-19744-00002</b>
<b>Permit Reviewer:</b>	<b>Alic Bent/EVP</b>

The Office of Air Quality (OAQ) has reviewed a permit modification application from Harrison Steel Castings Company relating to revisions to their steel and ductile iron castings permit.

#### **Explanation of Modification**

On February 6, 2001, Harrison Steel Castings Company submitted an application for the construction of an Airset molding line. On June 13, 2001, a PSD Significant Source Modification approval was issued for the construction of the new Airset molding line and on April 23, 2002, a PSD Significant Permit Modification approval was issued for the operation of the new Airset molding line. The addition of the Airset molding line to the existing major stationary source was determined to be major for VOC. Therefore, pursuant to 326 IAC 2-2, the PSD BACT requirements applied, and the modification was incorporated into the Part 70 Operating Permit.

On July 19, 2004, Harrison Steel Castings Company submitted an application to the OAQ requesting the following changes to their existing Part 70 Permit T045-6002-00002:

- (a) The Permittee stated that in a recent stack test conducted on the Airset line for PM and PM10, the shakeout unit did not show compliance with the PM and PM10 limits contained in the Condition D.8.3 of the Part 70 Permit. In order to address this issue, the Permittee is requesting that the PM and PM10 limits for shakeout be increased and the PM and PM10 limits for the other processes (sand, pouring and cooling, mechanical reclaimer, and thermal reclaimer) on the Airset line be decreased. The production limits will not be revised. The resulting total allowable potential to emit (PTE) PM and PM-10 from all of these processes remains essentially the same as the total allowable PTE in the original permit.

- (b) The Permittee is requesting that the VOC emission limits for the thermal reclaim system, which controls the mold sand mixer be amended based on the result of the testing conducted on the thermal reclaim system on May 8, 2003. The current permit limits emissions from the thermal sand reclaim system to 0.013 pounds VOC per ton of sand mixed, which is equivalent to the maximum VOC emissions of 0.61 pounds per hour, and requires the thermal sand reclaim thermal oxidizer to have an overall control efficiency of 98% efficient. The test results indicate that while the overall control efficiency is close to the permit limit (98%), the pounds VOC per hour and pounds VOC per ton of sand mixed values are not.

Based on Condition D.8.1(g) of Part 70 Permit T045-6002-00002, the Department may revise this permit to adjust the VOC limitation based upon the results of the stack test required in Condition D.8.10. Therefore, based on the VOC emissions test results the Permittee has requested that the thermal sand reclaim system limits be changed to 2.2 pounds VOC per hour and a concentration limit of 30 ppmv as propane (3 hour average). The Permittee will continue to operate the thermal oxidizer at 98% control efficiency and maintain a minimum thermal oxidizer temperature of 1400 °F.

- (c) The current permit established VOC emission limitations for pouring/cooling, and shakeout to meet the requirement for Best Achievable Control Technology (BACT), based on AP-42 emission factors of 0.14 lbs/ton for pouring/cooling and 1.2 lbs/ton for shakeout. However, based on VOC emission test results (conducted February, 2004), both the shakeout process and the pouring/cooling process emission rates were considerably higher than the allowable emission rates based on the AP-42 factors. Therefore, based on the VOC emissions test results, the Permittee has requested that the BACT limits be changed to 1.40 pounds of VOC emitted per ton of metal for the pouring and cooling process and 3.32 pounds of VOC emitted per ton of metal for the shakeout process.
- (d) Harrison Steel Castings is also requesting that the throughput limits and the emission limits established for the north and south sand systems be adjusted. It was assumed at the time that Part 70 Permit T045-6002-00002 was issued that the south sand system would continue to operate at historic levels, and the north sand system use would diminish. However, since the permit was issued the south sand system has been mostly discontinued and reliance on the north sand system has increased. The total combined allowable PTE for the north and south systems will not be revised.

### Existing Approvals

The source was issued a Part 70 Operating Permit T045-6002-00002 on November 30, 2001. The source has since received the following:

- (a) First Significant Source Modification No.: 045-12788, issued on June 13, 2001;
- (b) First Minor Permit Modification No.: 045-15172, issued on April 23, 2002;
- (c) First Minor Source Modification No.: 045-20502, issued on February 25, 2005;
- (d) Second Significant Source Modification No.: 045-19746, issued on March 15, 2005;
- (e) First Significant Permit Modification No.: 045-20240, issued on May 13, 2005; and
- (f) Second Significant Permit Modification No.: 045-20409, issued on August 24, 2005.

This source has three (3) pending permits, Third Significant Permit Modification No.: 045-21589-00002, Fourth Significant Source Modification (SSM) No.: 045-21035-00002 and Fourth Significant Permit Modification No.: 045-21159-00002. The 3<sup>rd</sup> SPM was on public notice during the period September 21, 2005 to October 21, 2005, and 4<sup>th</sup> SSM and 4<sup>th</sup> SPM were on public notice during the period September 15, 2005 to October 15, 2005. The units being modified in the three (3) pending permits (3<sup>rd</sup> SPM, 4<sup>th</sup> SSM and 4<sup>th</sup> SPM) are not related to the units being modified in the proposed Significant Source Modification (SSM) No.: 045-20850-00002 and Significant Permit Modification (SPM) No.: 045-19744-00002 and the actual PTE (based on future actual emissions minus the average actual emissions for the past two years) will not be increased. Therefore, IDEM has determined that the units being permitted through the three (3) pending permits (3<sup>rd</sup> SPM, 4<sup>th</sup> SSM and 4<sup>th</sup> SPM) and the proposed SSM/SPM can be treated as separate projects and don't have to be combined for permit review.

### Enforcement Issue

The source has an enforcement action pending for noncompliance with their BACT limits.

### Recommendation

The staff recommends to the Commissioner that the Significant Source Modification and Significant Permit Modification be approved.

This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on July 19, 2004.

### Emission Calculations

See Appendix A: pages 1 of 1 of this document for detailed emissions calculations.

### Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(1), which states that any modification subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) requires a significant source modification. The Significant Source Modification will be incorporated into the permit through a Significant Permit Modification. This modification is being performed pursuant to 326 IAC 2-7-12(d)(1) which states "every significant change in existing monitoring Part 70 permit terms or conditions and every relaxation of reporting or record keeping permit terms or conditions shall be considered significant."

### County Attainment Status

The source is located in Fountain County.

Pollutant	Status
PM2.5	Attainment
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx are considered when evaluating the rule applicability relating to ozone. Fountain County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Fountain County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.
- (c) Fountain County has been classified as attainment or unclassifiable in Indiana for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Greater than 100
PM-10	Greater than 100
SO <sub>2</sub>	Less than 100
VOC	Greater than 100
CO	Less than 100
NOx	Less than 100

- (a) This existing source is a major stationary source because PM-10 and VOC are emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.
- (b) These emissions are based upon Part 70 Permit No. 045-6002-00002, issued on November 30, 2001.

## Potential to Emit After Controls after the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units after the modification.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Airset Sand Handling	<del>2.99</del> <b>0.66</b>	<del>0.42</del> <b>0.66</b>	--	0.00	--	--	--
Airset Pouring and Cooling	<del>12.19</del> <b>11.08</b>	<del>12.19</del> <b>3.88</b>	--	<del>3.88</del> <b>38.78</b>	--	--	--
Airset Shakeout	<del>0.83</del> <b>6.93</b>	<del>0.61</del> <b>8.31</b>	--	<del>33.24</del> <b>91.96</b>	--	--	--
Airset Mechanical Reclaimer	<del>2.99</del> <b>0.66</b>	<del>0.42</del> <b>0.66</b>	--	0.00	--	--	--
Airset Thermal Reclaimer	<del>0.45</del> <b>0.10</b>	<del>0.06</del> <b>0.10</b>	--	0.08	--	--	--
North Sand Handling	<del>0.72</del> <b>2.59</b>	<del>14.00</del> <b>14.04</b>	--	0.00	--	--	--
South Sand Handling	<del>4.08</del> <b>0.79</b>	<del>0.28</del> <b>0.06</b>	--	0.00	--	--	--
Total Emissions	<del>24.25</del> <b>22.81</b>	<del>27.98</del> <b>27.71</b>	--	<del>37.2</del> <b>130.74</b>	--	--	--

Note: The actual PTE (based on the test of future actual emissions minus the average actual emissions for the past two years) will not increase due to this modification, because the proposed modification will change the allowable PTE and will not change the current operations.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. However, since the VOC emission limits for Airset pouring and cooling, and shakeout processes established pursuant to the BACT analysis for the previous 326 IAC 2-2 (PSD) review are being revised, the PSD BACT analysis performed previously needs to be reviewed again based on today's costs.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) incorporated into this permit.
- (b) The National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20, (40 CFR Part 63.7680, Subpart EEEEE (Iron and Steel Foundries) applies to each new or existing iron and steel foundry that is a major source of HAP emissions. The rule covers emissions from metal melting furnaces, scrap preheaters, pouring areas, pouring stations, automated conveyor and pallet cooling lines that use a sand mold system, automated shakeout lines that use a sand mold system, and mold and core making lines. The final rule also covers fugitive emissions from foundry operations.

This source is an existing steel and ductile iron castings foundry that is a major source of HAP emissions. Pursuant to this rule, as an existing affected source the Permittee must comply with 40 CFR 63, Subpart EEEEE on and after April 22, 2007. Since this rule has a future compliance date, the specific details of the rule and how the permittee will demonstrate compliance are not provided in the permit. The Permittee shall submit an application for a significant permit modification at least nine months prior to the April 22, 2007 compliance date that will specify the option or options for the emission limitations and standards and methods for determining compliance chosen by the Permittee. At that time, the Department will include the specific details of the rule and how the Permittee will demonstrate compliance. In addition, pursuant to 40 CFR 63, Subpart EEEEE, the Permittee shall submit the requisite notifications and reports pursuant to Subpart EEEEE and 40 CFR 63, Subpart A, and such are contained in the permit.

- (c) This Part 70 source does not include a pollutant-specific emissions units as defined in 40 CFR 64.1:
- (1) with the potential to emit before controls equal to or greater than one hundred (100) tons per year;
  - (2) that is subject to an emission standard and has a control device that is necessary to meet that limit; and
  - (3) uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

The Airset molding line shakeout process at this Part 70 source has uncontrolled PTE of VOC of greater than 100 tons per year, but it does not use a control device as defined in 40 CFR 64.1 to comply with an emission limitation or standard. Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable to this source.

### **State Rule Applicability - Individual Facilities**

#### **326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules)**

This existing source is a major stationary source because it is one of the 28 listed source categories (i.e. secondary metal production) under 326 IAC 2-2, and potential volatile organic compound (VOC) and particulate matter (PM & PM-10) emissions are greater than 100 tons per year. On June 13, 2001, a PSD Significant Source Modification (SSM) approval was issued for the construction of a new Airset molding line and on April 23, 2002, a PSD Significant Permit Modification (SPM) approval was issued for the operation of the new Airset molding line. The VOC BACT emission limits listed in Conditions D.8.1 (a) and D.8.1 (b) of the PSD BACT permits for the pouring and cooling, and the shakeout processes were based on AP-42 emission factors of 0.14 lbs/ton for pouring and 1.2 lbs/ton for shakeout. Stack tests performed on both the shakeout process, and the pouring and cooling process in February, 2004, showed that VOC emission rates from both the shakeout process, and the pouring and cooling process were much higher than the allowable emission rates. Therefore, the VOC emission rates will be revised through the proposed Part 70 SSM and SPM, under the requirements of 326 IAC 2-2 (PSD) and 326 IAC 8-1-6 (BACT).

Since the VOC emission rates are now being revised to less stringent emission rates than the rates determined to be PSD BACT in the issued SSM and SPM, the BACT analysis results as presented in previous SSM and SPM to the Title V permit are no longer valid. Therefore, a re-analysis of BACT for both the shakeout process, and the pouring and cooling process were performed as shown in Appendix B of the proposed SSM and SPM.

Based on the PSD BACT determination, installation of the RTO for VOC control at the pouring and cooling, and shakeout processes is not considered to be BACT, nor is such control necessary to protect ambient air quality. Therefore, BACT for the pouring/casting and castings cooling operations will be the limit on VOC emissions of 1.40 pounds per ton of metal poured and 8.85 pounds per hour.

The BACT for the shakeout process will be the limit on VOC emissions of 3.32 pounds per ton of metal poured and 21.0 pounds per hour.

These limits and the operation conditions in the existing PSD permit (T 045-6002-00002), except Conditions D.8.1(a) and D.8.1(b) which will be revised through this Part 70 Significant Source Modification, will satisfy the requirements of 326 IAC 2-2 (PSD) for the pouring and cooling, and the shakeout processes.

#### 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The Airset mold line, has potential VOC emissions of greater than 25 tons per year. Pursuant to this rule, the process shall reduce emissions using BACT. The VOC emissions from this process are also limited by the BACT requirements of 326 IAC 2-2. Control technology summaries of the facilities generating VOC emissions from this major modification are discussed in the *BACT Analysis Report* included in Appendix B. Compliance with the BACT requirements in 326 IAC 2-2-3 will satisfy the BACT requirements in 326 IAC 8-1-6 (BACT).

### Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no new compliance determination requirements applicable to the Airset molding line due to this modification

### Changes Proposed

The changes listed below have been made to the Part 70 Operating Permit T045-6002-00002.

- (a) The facility description in Sections A.2(10)(c) and D.8(c) has been revised to include the new regenerative thermal oxidizer for the Airset molding line shakeout process.
- (10) One (1) new Airset molding line rated at a maximum steel production rate of 15.73 tons of steel or iron per hour and 47.2 tons of sand per hour. The Airset molding line consists of the following processes/equipment:

- (c) shakeout operations with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with **particulate** emissions controlled by one (1) baghouse, identified as DC12, and exhausting to stack DC12;
- (b) The throughput limits and the emission limits established for the north and south sand systems have been adjusted as follows:

D.6.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) and ~~40 CFR 52.21~~ not applicable, the following condition shall apply:

- (a) The PM emissions from the baghouse DC41 controlling the North Sand Handling System shall not exceed 0.072 pound per ton of sand.
- (b) The PM-10 emissions from the baghouse DC41 controlling the North Sand Handling System shall not exceed ~~4.4~~ **0.39** pounds per ton of sand.
- (c) The sand throughput to the North sand handling system shall not exceed ~~20,000~~ **72,000** tons per 12 consecutive month period **with compliance determined at the end of each month.**
- (d) The PM emissions from the baghouses DC20, DC35, DC36, and DC39 controlling the South Sand Handling System shall not exceed 0.072 pound per ton of sand (total for all four baghouses combined).
- (e) The sand throughput to the South sand handling system shall not exceed ~~646,667 tons per 12 consecutive month period. This limit shall apply until the new Airset line begins operation. On and after the first day of operation of the new Airset line, the sand throughput to the South sand handling system shall not exceed 113,319.2~~ **22,000** tons per 12 consecutive month period **with compliance determined at the end of each month.**
- (f) The PM10 emissions from the baghouses DC20, DC35, DC36, and DC39 controlling the South Sand Handling System shall not exceed 0.005 pound per ton of sand (total for all four baghouses combined).

Therefore, the requirements of 326 IAC 2-2 (PSD) and ~~40 CFR 52.21~~ shall not apply. Compliance with (e) and (f) of this condition are necessary in order that the requirements of 326 IAC 2-2 (PSD) and ~~40 CFR 52.21~~ shall not apply to the new Airset mold line, as described in Section D.8 of this permit.

- (c) The BACT limits in D.8.1(a) and (b) have been changed based on the VOC emissions test results, conducted February 2004, and re-analysis of BACT.

The VOC emission limit (D.8.1(g)) for the thermal reclaim system, which controls the mold sand mixer has been amended based on the result of the testing conducted on the thermal reclaim system on May 8, 2003 as follows:

D.8.1 BACT for VOC [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6] [326 IAC 2-4.1-1]

Pursuant to 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules) and 326 IAC 8-1-6 (BACT), and in order to render the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) not applicable to the new Airset line, the Permittee shall comply with the following BACT requirements:

- (a) The VOC emissions from the pouring/casting and castings cooling operations shall be limited to ~~0.14~~ **1.40** pounds per ton of metal poured and ~~2.20~~ **8.85** pounds per hour, **and the resin content shall not exceed 1.23% by weight.**
- (b) The VOC emissions from the **Airset molding line** shakeout operations shall be limited to ~~4.2~~ **3.32** pounds per ton of metal and ~~48.9~~ **21.0** pounds per hour.
- (c) The metal throughput to this new Airset mold line shall not exceed 55,400 tons per 12 consecutive month period. ~~Until 12 months of data have been collected, the limit shall be 4,617 tons per month.~~
- (d) The VOC emissions from the mold making process shall be limited to 1.17 pounds per ton of sand and 22.20 pounds per hour.
- (e) The VOC content of the mold wash shall not exceed 0.0 percent by weight.
- (f) The mold production shall not exceed 166,200 tons per 12 consecutive month period and the binder usage shall not exceed 1,662 tons per 12 consecutive month period. ~~Until 12 months of data have been collected, the mold production limit shall be 13,850 tons per month and the binder usage limit shall be 138.5 tons per month.~~
- (g) The VOC emissions from the thermal sand reclamation system, which controls the mold sand mixer, shall not exceed ~~0.013 pounds per ton of sand mixed and 0.61~~ **2.2** pounds per hour. ~~The Department may revise this permit to adjust the VOC limitation based upon the results of the stack test required in Condition D.8.10. The Department will provide an opportunity for public notice and comment prior to finalizing any permit revision. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to this permit condition.~~
- (h) The thermal sand reclamation system shall control VOC emissions from the mixer and achieve a minimum of 98% destruction efficiency.
- (i) The maximum throughput rate to the shakeout process shall not exceed 15.73 tons of metal per hour.
- (d) The PM and PM10 limits for shakeout have been increased and the PM and PM10 limits for the other processes (sand, pouring and cooling, mechanical reclaimer, and thermal reclaimer) on the Airset line have been decreased as follows:

#### D.8.3 PM and PM10 Emissions [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules) not applicable for PM and PM10, the Permittee shall comply with the following requirements:

- (a) At least 99% of all particulate matter (PM and PM-10,) emissions generated during sand handling, mechanical reclaim, and thermal reclaim operations shall be captured by a baghouse and controlled such that visible emissions from any building opening shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).
- (b) At least 96% of all particulate matter (PM and PM-10,) emissions generated during shakeout operations shall be captured by a baghouse and controlled such that visible emissions from any building opening shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

- (c) The PM emissions from the baghouse DC12 controlling the shakeout operations shall be limited to a total of ~~0.03~~ **0.25** pounds per ton of metal throughput. Compliance with this limit will also satisfy the requirements of Condition D.8.2.
  - (d) The PM10 emissions from the baghouse DC12 controlling the shakeout operations shall be limited to a total of ~~0.022~~ **0.3** pounds per ton of metal throughput.
  - (e) At no time shall the south shakeout process be in operation at the same time when any one of the Airset shakeout units is in operation.
  - (f) The PM emissions from the baghouse DC46 controlling the Airset sand handling operations and the thermal reclaimer shall be limited to ~~0.036~~ **0.008** pounds per ton of sand throughput to the Airset sand handling system. Compliance with this limit will also satisfy the requirements of Condition D.8.2.
  - (g) The PM10 emissions from the baghouse DC46 controlling the sand handling operations and the thermal reclaimer shall be limited to ~~0.005~~ **0.008** pounds per ton of sand throughput.
  - (h) The sand throughput to the thermal sand reclamation system shall not exceed 24,930 tons per 12 consecutive month period. ~~Until 12 months of data have been collected, the limit shall be 2,078 tons per month.~~
  - (i) The sand throughput to the sand handling system shall not exceed 166,200 tons per 12 consecutive month period. ~~Until 12 months of data have been collected, the limit shall be 13,850 tons per month.~~
  - (j) The PM emissions from the baghouse DC45 controlling the mechanical reclaimer shall be limited to ~~0.036~~ **0.008** pounds per ton of sand throughput. Compliance with this limit will also satisfy the requirements of Condition D.8.2.
  - (k) The PM10 emissions from the baghouse DC45 controlling the mechanical reclaimer shall be limited to ~~0.005~~ **0.008** pounds per ton of sand throughput.
  - (l) The PM emissions from the pouring/casting process shall be limited to ~~0.22~~ **0.2** pounds per ton of metal throughput. Compliance with this limit will also satisfy the requirements of Condition D.8.2.
  - (m) The PM10 emissions from the pouring/casting process shall be limited to ~~0.22~~ **0.07** pounds per ton of metal throughput.
  - (n) The PM emissions from the castings cooling process shall be limited to ~~0.22~~ **0.2** pounds per ton of metal throughput. Compliance with this limit will also satisfy the requirements of Condition D.8.2.
  - (o) The PM10 emissions from the castings cooling process shall be limited to ~~0.22~~ **0.07** pounds per ton of metal throughput.
- (e) The following condition has been added to the permit for the Airset molding line.

#### **Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### **D.8.15 Record Keeping Requirements**

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- (e) In order to document compliance with Condition D.8.1, the Permittee shall maintain records in accordance with (1) through (34) below.

- (1) Copies of the Material Safety Data Sheets for each mold wash material used at the Airset mold line;
  - (2) The amount of binder usage in the Airset mold line, each month of operation; and
  - (3) The sand throughput to the thermal sand reclaimer, each month of operation; and
  - (4) **The percent by weight resin content of the Airset line pouring/cooling operation.**
- (f) The following reporting form has been revised to include the adjusted throughput limits for the north and south sand systems:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Harrison Steel Castings Company  
Source Address: 900 North Mound Street, Attica, Indiana 47918  
Mailing Address: P.O. Box 60, Attica, Indiana 47918  
Part 70 Permit No.: T045-6002-00002  
Facility: North and South sand handling systems  
Parameter: sand throughput to each system  
Limit: **72,000** ~~20,000~~ tons per 12 consecutive month period for the North sand system; and ~~646,667 tons per 12 consecutive month period for the South sand system (which applies until the first day of operation of the new Airset Line)~~ **22,000** tons per 12 consecutive month period for the South sand system ~~(which shall apply on and after the first day of operation of the Airset Line)~~ **with compliance determined at the end of each month.**

- (g) The following condition is no longer applicable and has been removed from the permit for the Airset molding line.

**D.3.2 PM10 Emission Credits [326 IAC 2-2]**

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- .....
- (a) The amount of metal throughput to the mold line identified as POUR shall not exceed 34,304.8 tons per 12 consecutive month period. ~~For the first month after startup of the Airset mold line, the limit shall be 2858.7 tons per month.~~
- (h) Indiana was required to incorporate credible evidence provisions into state rules consistent with the SIP call published by U.S. EPA in 1997 (62 FR 8314). Indiana has incorporated the credible evidence provision in 326 IAC 1-1-6. This rule is effective March 16, 2005; therefore, the condition reflecting this rule will be incorporated into your permit as follows:

**B.25 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]**

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**For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.**

- (i) IDEM has reconsidered the requirement to develop and follow a Compliance Response Plan. The Permittee will still be required to take reasonable response steps when a compliance monitoring parameter is determined to be out of range or abnormal. Replacing the requirement to develop and follow a Compliance Response Plan with a requirement to take reasonable response steps will ensure that the control equipment is returned to proper operation as soon as practicable, while still allowing the Permittee the flexibility to respond to situations that were not anticipated. The Section D conditions and Table of Contents that refer to this condition have been revised to reflect the new condition title, without replication herein, and the following changes have been made to Condition C.17:

C.17 ~~Compliance Response Plan—Preparation, Implementation, Records, and Reports~~  
**Response to Excursions or Exceedances** [326 IAC 2-7-5] [326 IAC 2-7-6]

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- (a) ~~The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:~~
- (1) ~~Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.~~
- (2) ~~If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.~~
- (b) ~~For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:~~
- (1) ~~Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or~~
- (2) ~~If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.~~
- (3) ~~If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.~~
- (4) ~~Failure to take reasonable response steps shall be considered a deviation from the permit.~~
- (c) ~~The Permittee is not required to take any further response steps for any of the following reasons:~~

- ~~(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.~~
- ~~(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.~~
- ~~(3) An automatic measurement was taken when the process was not operating.~~
- ~~(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.~~
- ~~(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B Deviations from Permit Requirements and Conditions.~~
- ~~(e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.~~
- ~~(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.~~
- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.**
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:**
  - (1) initial inspection and evaluation;**
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or**
  - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.**
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:**
  - (1) monitoring results;**
  - (2) review of operation and maintenance procedures and records;**
  - (3) inspection of the control device, associated capture system, and the process.**

- (d) **Failure to take reasonable response steps shall be considered a deviation from the permit.**
- (e) **The Permittee shall maintain the following records:**
- (1) **monitoring data;**
  - (2) **monitor performance data, if applicable; and**
  - (3) **corrective actions taken.**
- (j) IDEM has determined that the Permittee is not required to keep records of all preventive maintenance. However, where the Permittee seeks to demonstrate that an emergency has occurred, the Permittee must provide, upon request, records of preventive maintenance in order to establish that the lack of proper maintenance did not cause or contribute to the deviation. Therefore, IDEM has deleted paragraph (b) of Section B – Preventive Maintenance, and has amended the Section B – Emergency Provisions condition as follows:
- B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]**
- 
- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- ~~If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:~~
- ~~Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204~~
- ~~The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~
- ~~(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.~~
- (e)(b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation.**

- ~~(d)~~(c) **Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.**

#### B.12 Emergency Provisions [326 IAC 2-7-16]

- .....
- (e) **The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.**

- (k) Upon further review, IDEM has determined that it is the permittee's responsibility to include routine control device inspection requirements in the applicable preventive maintenance plan. Since the Permittee is in the best position to determine the appropriate frequency of control device inspections and the details regarding which components of the control device should be inspected, the conditions requiring control device inspections have been removed from the permit. In addition, the requirement to keep records of the inspections have been removed. The Table of Contents is also revised without replication herein. The following changes are made to the permit:

#### D.2.12 Baghouse Inspections

~~An inspection shall be performed each calendar quarter of all bags (DC4, DC38, DC5, DC40, and DC42) controlling the electric arc furnaces when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.~~

#### D.3.8 Baghouse Inspections

~~An inspection shall be performed each calendar quarter of all bags controlling the shakeout systems when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.~~

### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.3.9 Record Keeping Requirements

- .....
- ~~(c) In order to document compliance with Condition D.3.8, the Permittee shall maintain records of the results of the inspections required under Condition D.3.8 and the dates the vents are redirected.~~

#### D.5.7 Baghouse Inspections

~~An inspection shall be performed each calendar quarter of all bags controlling the shot blasting machines when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.~~

## **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.5.8 Record Keeping Requirements**

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- .....
- (c) ~~In order to document compliance with Condition D.5.7, the Permittee shall maintain records of the results of the inspections required under Condition D.5.7 and the dates the vents are redirected.~~

### **D.6.8 Baghouse Inspections**

---

~~An inspection shall be performed each calendar quarter of all bags controlling the sand handling systems when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.~~

## **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.6.9 Record Keeping Requirements**

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- .....
- (c) ~~In order to document compliance with Condition D.6.8, the Permittee shall maintain records of the results of the inspections required under Condition D.6.8 and the dates the vents are redirected.~~

### **D.7.6 Scrubber Inspections**

---

~~An inspection shall be performed each calendar quarter of the scrubber controlling the Isocure core machine when venting to the atmosphere. A scrubber inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.~~

## **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.7.7 Record Keeping Requirements**

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- .....
- (b) ~~In order to document compliance with Condition D.7.6, the Permittee shall maintain records of the results of the inspections required under Condition D.7.6 and the dates the vents are redirected.~~

### **D.8.14 Baghouse Inspections**

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~~An inspection shall be performed each calendar quarter of all bags controlling the shakeout, sand handling, mechanical reclamation, and thermal reclamation processes when the ventilation system is configured to vent to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.~~

## Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

### D.8.15 Record Keeping Requirements

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.....

- (c) ~~To document compliance with Condition D.8.14, the Permittee shall maintain records of the results of the inspections required under Condition D.8.14 and any dates the baghouse exhaust is changed from indoors to outdoors, and from the outdoors to the indoors.~~
- (l) Upon further review, IDEM has determined that once per day monitoring of the control device (or of visible emission notations) is generally sufficient to ensure proper operation of the control device. IDEM has also determined that monitoring these parameters once per day is sufficient to satisfy the requirements of the Part 70 rules at 326 IAC 2-7-5 and 326 IAC 2-7-6. The following changes are made to the permit:

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.2.11 Visible Emissions Notations

---

- (a) Visible emission notations of each of the baghouse (DC4, DC38, DC5, DC40, and DC42) stack exhaust(s) shall be performed once per ~~shift~~ **day** during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- .....

- (e) ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an~~ **If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances.** Failure to take response steps in accordance with ~~Section C - Compliance Response Plan—Preparation, Implementation, Records and Reports~~ **Response to Excursions or Exceedances** shall be considered a deviation from this permit.

### D.2.12 Parametric Monitoring

---

The Permittee shall record the ~~total static~~ pressure drop across the baghouses (DC4, DC38, DC5, DC40, and DC42) used in conjunction with the electric arc furnaces (EAF2, EAF3, and EAF4), at least once per ~~shift~~ **day** when the associated electric arc furnace is in operation when venting to the atmosphere. ~~Unless operated under conditions for which the Section C- Response to Excursions and Exceedances specifies otherwise, the pressure drop across the baghouses shall be maintained within~~ **When for any one reading, the pressure drop across the baghouse is outside** the range of 2.0 - 8.0 inches of water or a range established during the latest stack test—, **the Permittee shall take reasonable response steps in accordance with** ~~The Section C - Compliance Response Plan—Preparation, Implementation, Records, and Reports~~ **Response to Excursions and Exceedances.** ~~for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a violation of~~ **deviation from this permit.**

The instrument used for determining the pressure shall comply with Section C ~~Pressure Gauge and Other Instrument Specifications~~, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

## Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

### D.2.14 Record Keeping Requirements

---

- (a) In order to document compliance with Condition D.2.10, the Permittee shall maintain records of the visible emission notations of each of the electric arc furnace stack exhausts once per ~~shift~~ **day**.
- (b) In order to document compliance with condition D.2.11, the Permittee shall maintain records of the ~~following operational parameters~~ **pressure drop** once per ~~shift~~ **day** during normal operation when venting to the atmosphere:
  - ~~(1) Inlet and outlet differential static pressure; and~~
  - ~~(2) Cleaning cycle operation.~~

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.3.6 Visible Emissions Notations

---

- (a) Visible emission notations of each of the controlled stack exhaust(s) shall be performed once per ~~shift~~ **day** during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.  
.....
- (e) ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an~~ **If abnormal emissions is are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances.** Failure to take response steps in accordance with ~~Section C - Compliance Response Plan—Preparation, Implementation, Records and Reports~~ **Response to Excursions or Exceedances** shall be considered a deviation from this permit.

### D.3.7 Parametric Monitoring

---

The Permittee shall record the ~~total static~~ pressure drop across each of the baghouses used in conjunction with the either of the shakeout systems, at least once per ~~shift~~ **day** when the associated shakeout system is in operation when venting to the atmosphere. ~~Unless operated under conditions for which the Section C—Response to Excursions and Exceedances specifies otherwise, the pressure drop across the baghouses shall be maintained within~~ **When for any one reading, the pressure drop across the baghouse is outside** the range of 2.0 - 8.0 inches of water or a range established during the latest stack test—, ~~the Permittee shall take reasonable response steps in accordance with The Section C - Compliance Response Plan—Preparation, Implementation, Records, and Reports~~ **Response to Excursions and Exceedances.** ~~for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.~~ Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a ~~violation of~~ **deviation from** this permit.

## Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

### D.3.9 Record Keeping Requirements

---

- (a) In order to document compliance with Condition D.3.6, the Permittee shall maintain records of visible emission notations of the shakeout system stack exhaust(s) once per ~~shift~~ **day**.
- (b) In order to document compliance with condition D.3.7, the Permittee shall maintain records of the ~~following operational parameters~~ **pressure drop** once per ~~shift~~ **day** during normal operation when venting to the atmosphere:
  - ~~(1) Inlet and outlet differential static pressure; and~~

~~(2) — Cleaning cycle operation.~~

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.5.5 Visible Emissions Notations

---

- (a) Visible emission notations of each of the shot blasting machines stack exhausts shall be performed once per ~~shift~~ **day** during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

- .....
- (e) ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an~~ **If abnormal emissions is are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances.** Failure to take response steps in accordance with ~~Section C - Compliance Response Plan—Preparation, Implementation, Records and Reports~~ **Response to Excursions or Exceedances** shall be considered a deviation from this permit.

### D.5.6 Parametric Monitoring

---

The Permittee shall record the ~~total static~~ pressure drop across each of the baghouses used in conjunction with the shot blasting machines, at least once per ~~shift~~ **day** when the shot blasting machines are in operation when venting to the atmosphere. ~~Unless operated under conditions for which the Section C—Response to Excursions and Exceedances specifies otherwise, the pressure drop across~~ **When for any one reading, the pressure drop across the baghouses DC11 and DC30 shall be maintained within is outside** the range of 0.2 - 6.0 inches of water or a range established during the latest stack test—, **the Permittee shall take reasonable response steps in accordance with** ~~The Section C - Compliance Response Plan—Preparation, Implementation, Records, and Reports~~ **Response to Excursions and Exceedances.** ~~Unless operated under conditions for which the Section C—Response to Excursions and Exceedances specifies otherwise, the pressure drop across~~ **When for any one reading, the pressure drop across** each of the other baghouses listed in this section ~~shall be maintained within is outside~~ the range of 2.0 - 6.0 inches of water or a range established during the latest stack test—, **the Permittee shall take reasonable response steps in accordance with** ~~The Section C - Compliance Response Plan—Preparation, Implementation, Records, and Reports~~ **Response to Excursions and Exceedances.** ~~The Section C—Response to Excursions and Exceedances for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.~~ A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C ~~Pressure Gauge and Other~~ Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

## Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

### D.5.8 Record Keeping Requirements

---

- (a) In order to document compliance with Condition D.5.5, the Permittee shall maintain records of visible emission notations of the shot blasting machines stack exhaust(s) once per ~~shift~~ **day**.
- (b) In order to document compliance with condition D.5.6, the Permittee shall maintain records of the ~~total static~~ pressure drop across each baghouse once per ~~shift~~ **day**.

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.6.6 Visible Emissions Notations

---

- (a) Visible emission notations of North Sand Handling System stack exhausts and the South sand handling system stack exhausts shall be performed once per ~~shift~~ **day** during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

.....

- (e) ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an~~ **If abnormal emissions is are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances.** Failure to take response steps in accordance with Section C - ~~Compliance Response Plan—Preparation, Implementation, Records and Reports~~ **Response to Excursions or Exceedances** shall be considered a deviation from this permit.

### D.6.7 Parametric Monitoring

---

The Permittee shall record the ~~total static~~ pressure drop across the baghouses DC41, DC20, DC35, DC36, and DC39 used in conjunction with the sand handling systems, at least once per ~~shift~~ **day** when the sand handling systems are in operation when venting to the atmosphere. ~~Unless operated under conditions for which the Section C—Response to Excursions and Exceedances specifies otherwise, the pressure drop across the baghouses shall be maintained within~~ **When for any one reading, the pressure drop across the baghouse is outside the** range of 2.0 - 8.0 inches of water or a range established during the latest stack test—, **the Permittee shall take reasonable response steps in accordance with** ~~The Section C - Compliance Response Plan—Preparation, Implementation, Records, and Reports~~ **Response to Excursions and Exceedances.** ~~for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.~~ Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a ~~violation of~~ **deviation from** this permit.

The instrument used for determining the pressure shall comply with Section C - ~~Pressure Gauge and Other~~ Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

## Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

### D.6.9 Record Keeping Requirements

---

- (a) In order to document compliance with Condition D.6.6, the Permittee shall maintain records of visible emission notations of the sand handling systems stack exhausts once per ~~shift~~ **day**.
- (b) In order to document compliance with condition D.6.7, the Permittee shall maintain records of the ~~following operational parameters~~ **pressure drop** once per ~~shift~~ **day** during normal operation when venting to the atmosphere:.
- (1) ~~Inlet and outlet differential static pressure; and~~
- (2) ~~Cleaning cycle operation.~~

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.7.5 Parametric Monitoring

---

The Permittee shall monitor and record the acid content, pressure drop, and flow rate of the scrubber, at least once per ~~shift~~ **day** when the associated Isocure core machine is in operation when venting to the atmosphere. ~~Unless operated under conditions for which the Section C - Response to Excursions and Exceedances specifies otherwise, the pressure drop across~~ **When for any one reading, the pressure drop across** the scrubber ~~shall be maintained within~~ **is outside** the range of 2.0 and 6.0 inches of water, or a range established during the latest stack test.; ~~the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Unless operated under conditions for which the Section C - Response to Excursions and Exceedances specifies otherwise, When for any one reading, the flow rate of the scrubber is less than shall be maintained at no less than 120 gallons per minute, or a minimum established during the latest stack test.; the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.~~

~~Unless operated under conditions for which the Section C - Response to Excursions and Exceedances specifies otherwise, When for any one reading, the acid content of each of the scrubbers shall be maintained at is greater than a pH level of less than or equal to 2, or an acid content established during the latest stack test.; the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. The Section C - Response to Excursions and Exceedances for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading, or when the flow rate is below the above mentioned minimum level for any one reading, or when the pH is above the above mentioned maximum level for any one reading. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a violation of deviation from this permit.~~

The instruments used for determining the pressure, flow rate, and pH level shall comply with Section C - ~~Pressure Gauge and Other~~ Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

## Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

### D.7.7 Record Keeping Requirements

---

- (a) In order to document compliance with condition D.7.5, the Permittee shall maintain records of the following operational parameters for the scrubber once per ~~shift~~ **day** during normal operation:
- (1) pressure drop;
  - (2) flow rate; and
  - (3) acid content (pH level).

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.8.11 Visible Emissions Notations

---

- (a) Visible emission notations of the baghouses DC12, DC45, and DC46 stack exhausts shall be performed once per ~~shift~~ **day** during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- .....

- (e) ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an~~ **If abnormal emissions is are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances.** Failure to take response steps in accordance with ~~Section C - Compliance Response Plan—Preparation, Implementation, Records and Reports~~ **Response to Excursions or Exceedances** shall be considered a deviation from this permit.

#### D.8.12 Parametric Monitoring

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~~The Permittee shall record the total static pressure drop across the baghouses DC12, DC45, and DC46 used in conjunction with the shakeout, sand handling, mechanical reclamation, and thermal reclamation processes, at least once per shift day when these processes are in operation when venting to the atmosphere. Unless operated under conditions for which the Section C—Response to Excursions and Exceedances specifies otherwise, the pressure drop across the baghouses shall be maintained within~~ **When for any one reading, the pressure drop across the baghouse is outside** the range of 2.0 - 8.0 inches of water or a range established during the latest stack test—, **the Permittee shall take reasonable response steps in accordance with** ~~The Section C - Compliance Response Plan—Preparation, Implementation, Records, and Reports~~ **Response to Excursions and Exceedances.** ~~for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a violation of~~ **deviation from** this permit.

The instruments used for determining the pressure shall comply with Section C - ~~Pressure Gauge and Other Instrument Specifications~~, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.8.14 Thermal Reclaimer Monitoring

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- .....
- (b) The duct pressure or fan amperage shall be observed at least once per ~~shift~~ **day** when the thermal sand reclaimer is in operation. This pressure or amperage shall be maintained within the range specified by the manufacturer or a range as established in the most recent compliant stack test, as approved by IDEM.

### Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.8.15 Record Keeping Requirements

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- (a) To document compliance with Condition D.8.12, the Permittee shall maintain records of visible emission notations of the baghouses DC12, DC45, and DC46 stack exhausts once per ~~shift~~ **day**.
- (b) To document compliance with Condition D.8.13, the Permittee shall maintain once per ~~shift~~ **day** records of the inlet and outlet differential ~~static~~ pressure.
- .....
- (d) To document compliance with Conditions D.8.1, D.8.8, and D.8.16, the Permittee shall maintain records in accordance with (1) and (2) below.
- (1) The continuous temperature records for the thermal reclaimer and the temperature used to demonstrate compliance during the most recent compliance stack test.
- (2) Records of the duct pressure or fan amperage once per ~~shift~~ **day**.

- (m) Upon further consideration, IDEM has determined to delete Condition D.2.13 (a), Broken or Failed Baghouse condition. Conditions D.3.8, D.5.7, D.6.8 and D.8.13 have been modified in a similar manner without replication herein. For multi-compartment baghouses, the permit will not specify what actions the Permittee needs to take in response to a broken bag. However, a requirement has been added to Condition D.2.9 requiring the Permittee to notify IDEM if a broken bag is detected and the control device will not be repaired for more than ten (10) days. Similar notification requirement is added to Conditions D.3.4, D.5.4, D.6.4 and D.8.7 without replication herein. This notification allows IDEM to take any appropriate actions if the emission unit will continue to operate for a long period of time while the control device is not operating in optimum condition. In order to avoid double jeopardy for the permittee to operate the control equipment at all times, Condition C.7, Operation of Equipment, is deleted from the permit without replication herein.

#### D.2.9 Particulate Matter

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In order to comply with the requirements of Conditions D.2.3 and D.2.4, the following conditions shall apply:

.....

- (e) **In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.**

#### D.2.13 Broken or Failed Bag Detection

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~~In the event that bag failure has been observed-~~

- ~~(a) For multi compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B - Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~
- ~~(b) For a single compartment baghouses~~ **controlling emissions from a process operated continuously, a failed units and the associated process will shall** be shut down immediately until the failed units has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

**Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.**

- (n) IDEM realizes that the instrument specifications can only be practically applied to analog units, and has therefore clarified Condition C.14 to state that the condition only applies to analog units. Upon further review, IDEM has also determined that the accuracy of the instruments is not nearly as important as whether the instrument has a range that is appropriate for the normal expected reading of the parameter. Therefore, the accuracy requirements have been removed from this condition:

C.14 ~~Pressure Gauge and Other~~ Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)]  
[326 IAC 2-7-6(1)]

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- (a) ~~Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed~~ **When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected normal maximum reading for the normal range shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (± 2%) of full scale reading.**
- (b) ~~Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (± 2%) of full scale reading.~~
- (c) ~~(b)~~ The Permittee may request **that** the IDEM, OAQ approve the use of ~~a pressure gauge or other~~ **an** instrument that does not meet the above specifications provided the Permittee can demonstrate **that** an alternative ~~pressure gauge or other~~ instrument specification will adequately ensure compliance with permit conditions requiring the measurement of ~~pressure drop or other~~ **the** parameters.
- (o) IDEM has decided to revise the permit to include the most recent IDEM mailing address without replication herein.
- (p) The following revisions were made to the Emission Statement condition to incorporate the revisions to 326 IAC 2-6 that became effective March 27, 2004. The revised rule was published in the April 1, 2004 Indiana Register.

C.19 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]  
[326 IAC 2-6]

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- (a) ~~The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:~~ **Pursuant to 326 IAC 2-6-3(b)(2), starting in 2008 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:**
- (1) ~~Indicate estimated actual emissions of criteria all pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting) listed in 326 IAC 2-6-4(a);~~
- (2) ~~Indicate estimated actual emissions of other regulated pollutants (as defined by 326 IAC 2-7-1)~~ **(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule")** from the source, for purposes of Part 70 fee assessment.
- (b) ~~The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:~~

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue,  
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- ~~(c)(b)~~ The ~~annual~~ emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (q) IDEM, OAQ has clarified the Condition B.20 (Operational Flexibility) as follows:

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions, which exceed the ~~emissions allowable under limitations provided in this~~ permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, ~~P.O. Box 6015~~  
Indianapolis, Indiana ~~46206-6015~~ **46204-2251**

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, **on a rolling five (5) year basis**, which document, ~~on a rolling five (5) year basis~~, all such changes and emissions ~~trading trades~~ that are subject to 326 IAC 2-7-20(b), (c), or (e). ~~and makes~~ **The Permittee shall make** such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification, which shall be submitted, is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade **emissions** increases and decreases ~~in emissions in~~ at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) **Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.**
- (r) Changes have been made to the record keeping and reporting requirements to reflect NSR reform provision at the major sources.

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.
- (c) **If there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, other than projects at a Clean Unit, which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1 (rr)), the Permittee shall comply with following:**

- (1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, document and maintain the following records:**
  - (A) A description of the project.**
  - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.**
  - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:**
    - (i) Baseline actual emissions;**
    - (ii) Projected actual emissions;**
    - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii); and**
    - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.**
- (2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and**
- (3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.**

**C.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]**

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- (a)** The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (b)** The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, ~~P.O. Box 6045~~  
Indianapolis, Indiana ~~46206-6045~~ **46204-2251**
- (c)** Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d)** Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, **unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.**
  - (f) **If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C- General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:**
    - (1) **The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx), for that regulated NSR pollutant, and**
    - (2) **The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).**
  - (g) **The report for a project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:**
    - (1) **The name, address, and telephone number of the major stationary source.**
    - (2) **The annual emissions calculated in accordance with (c)(2) and (3) in Section C- General Record Keeping Requirements.**
    - (3) **The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).**
    - (4) **Any other information that the Permittee deems fit to include in this report,**

**Reports required in this part shall be submitted to:**

**Indiana Department of Environmental Management  
Air Compliance Section, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251**
  - (h) **The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.**
  - (s) Condition C.2(a) was revised to reflect the correct opacity limit in attainment areas.
- C.2 Opacity [326 IAC 5-1]**
- 
- Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (a) Opacity shall not exceed an average of ~~twenty percent (20%)~~ **forty percent (40%)** in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

## **Conclusion**

The operation of this steel and ductile iron castings plant shall be subject to the conditions of the attached proposed Significant Source Modification No. 045-20845-00002 and Significant Permit Modification No. 045-19744-00002.

**Appendix A: Emission Calculations**  
**Steel and Ductile Iron Foundry Emissions**

Page 1 of 1 TSD App A

**Company Name:** Harrison Steel Castings, Co.  
**Address City IN Zip:** 900 North Mound St., Attica, IN 47918  
**Permit Number:** SSM 045-20845-00002  
**Reviewer:** AB/EVP

\* \* Process Emissions Before Limit\* \*

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Pouring/Cooling	15.73	VOC	1.40	96.46

Process:	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)
Shakeout	15.73	VOC	3.32	228.74

\* \* Process Emissions After Limit/Control\* \*

Process:	Limited Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Eac (ton/yr)
Pouring/Cooling	6.3242	VOC	1.40	38.78
Shakeout	6.3242	VOC	3.32	91.96

**Methodology:**

Ef = Emission factor

Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Eac = Potential Emissions after limit = Limited Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

1 ton = 2000 lbs

## **APPENDIX B BACT ANALYSIS REPORT**

### **Source Background and Description**

Source Name:	Harrison Steel Castings Company
Source Location:	900 North Mound Street, Attica, Indiana 47918
County:	Fountain
SIC Code:	3325, 3321
Operation Permit No.:	T045-6002-00002
Operation Permit Issuance Date:	November 30, 2001
Significant Source Modification No.:	045-20845-00002
Significant Permit Modification No.:	045-19744-00002
Permit Reviewer:	AB/EVP

### **Harrison Steel Castings BACT Assessment for VOC Emissions from the Airset Line Pouring, Cooling and Shakeout Processes**

The Airset casting line at Harrison Steel Castings is currently subject to Part 70 air operating permit No. T-045-6002-00002. The requirements of Condition D.8.1 of that permit include limitations established to satisfy the requirements for Best Achievable Control Technology (BACT) for Volatile Organic Compounds (VOCs) under both the Prevention of Significant Deterioration (PSD) rules and 326 IAC 8-1-6 (State BACT). The existing VOC emission limitations include a limit of 0.14 pounds per ton of metal poured for the pouring and cooling process, and a limit of 1.2 pounds/ton metal for the shakeout process. The permit also includes a limit on the total metal poured of 55,400 tons per 12-consecutive month period, a limit of 166,200 tons of mold sand per 12-consecutive month period and a limit on the amount of resin used of 1662 tons per 12-consecutive month period. The VOC emission limits reflect the VOC emission factor for pouring and shakeout processes found in AP-42, "A compilation of air emission factors". These emission factors were established based on green sand mold casting processes.

Since the construction and operation of the airset line, Harrison Steel has determined that ratio's of mold sand and resin usages are not consistent with the VOC emission limits. The amount of mold sand and resin used was assumed to be at a 3:1 ratio for the review of the existing Part 70 permit. A mold sand and resin at a ratio of 2.8:1 has been used at the source. In order to make adequate castings Harrison Steel also initially determined that it is necessary to use resin at a 1.33% level rather than the 1% resin content assumed for the permit. The stack testing conducted on the pouring/cooling and shakeout processes was done on molds that had 1.33% resin. Since the testing was conducted, Harrison Steel has been able to lower the resin content to 1.23%.

At the time the original permit was issued, there were no specific emission factors for chemically bonded mold lines. In order to demonstrate compliance with the VOC limits, Harrison Steel Castings was required to conduct stack testing of these processes. Based on recent tests of the Airset line VOC emissions from the pouring/cooling and shakeout processes, it was determined that the uncontrolled emission rates of VOCs from these processes are greater than the permit limits. The emission rate associated with the pouring and cooling process was determined to be 1.52 pounds per ton of metal. The emission rate from the shakeout process was determined to be 3.59 pound per ton of metal. These emission factors were then adjusted downward by the ratio of 1.33 to 1.23 to account for the reduced resin content currently in use at the facility. The adjustments result in the emission factors of 1.40 pounds per ton for the pouring and cooling process, and 3.32 pounds per ton for the shakeout process.

These higher emission rates appear to be inherent to the chemically bonded mold process and materials. IDEM, OAQ has determined that in order to allow the source to operate under these higher VOC emission limits, the Best Available Control Technology (BACT) analysis performed for the original permit must be re-assessed and revised accordingly, at today's purchase and operating costs. Therefore a revised BACT analysis for the control of VOC emissions using the recent stack test emission results from the Airset line pouring/cooling and shakeout processes was recently conducted and submitted by the source. This re-assessment is intended to satisfy the requirements for BACT for VOCs under both the PSD rule (326 IAC 2-2) requirements and the state BACT requirement under 326 IAC 8-1-6.

### **BACT Analyses**

Harrison Steel Castings conducted the BACT analysis in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft USEPA *New Source Review Workshop Manual*, which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below.

- (1) Identify all potentially available control options;
- (2) Eliminate technically infeasible control options;
- (3) Rank remaining control technologies by control effectiveness;
- (4) Evaluate the most effective controls and document the results; and
- (5) Select BACT.

Also in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft USEPA *New Source Review Workshop Manual*, BACT analyses take into account the energy, environmental, and economic impacts on the source. Emission reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to air pollution thereby protecting public health and the environment.

### **Pouring and Cooling**

#### **Step 1 – Identify Control Options**

The following technologies were evaluated to control VOC emissions from the pouring and cooling processes:

- (a) The EPA's RACT/BACT/LAER Clearinghouse (RBLC) was first searched to obtain recent determinations of VOC emission controls for chemically bonded casting lines. There were no specific entries found in the RBLC for chemically bonded mold lines, except for the permit limitations (no add-on controls) for Harrison Steel Castings described above. Other known permits, which may have contained VOC emission limitations for chemically bonded mold lines were also searched.

(b) Harrison Steel also evaluated a variety of control technologies, including the following:

Control Technology	Control Efficiency	Required VOC inlet conc.	Other Considerations	Technical Feasibility
Regenerative Thermal Oxidizer	94-98%	1,000 - 10,000 ppm < 50% LEL	NA	yes
Catalytic Incinerator	92-98%	100 - 1,000 ppm <25% LEL	Contaminants in the exhaust stream can poison or foul the catalyst bed	no
Flare	98%	> 13,000 ppm 100% UEL	Exhaust stream concentration must be high enough to sustain combustion	no
Carbon Adsorption	94-95%	10 - 10,000 ppm	Contaminants in the exhaust stream can poison or foul the carbon adsorption media	no

(c) Evaluation of process materials:

The VOC emission from the pouring/cooling and shakeout processes result from the breakdown of the resins materials in the mold when they come into contact with the hot molten metal. The amount of VOCs emitted can be affected by both the resin content and the type of resin used. Newer resin systems have been developed which emit lower levels of VOCs, and the resin system that Harrison Steel uses is a lower emitting resin according to the resin manufacturer. The source has also been successful in lowering the resin content of the molds from 1.33 % to 1.23%.

## **Step 2 – Eliminate Technically Infeasible Control Options**

Based on the results from the RBLC database search, vendor review, and evaluation of the control technologies, it was determined that the use of a catalytic incinerator, flare and carbon adsorption are not technically feasible options for this source for the following reasons:

**Catalytic Incinerator** - The primary concern with the use of catalytic incineration is the potential for fouling of the catalyst. While this unit would be placed downstream of the dust collection equipment, there will still be some level of particulate matter that could lead to contamination or plugging. There is also insufficient data regarding the speciation of VOCs to properly evaluate the feasibility of this technology. Limited available data suggests that higher molecular weight VOCs are present in the exhaust, and these compounds could very well contaminate or foul catalyst beds. For these reasons, catalytic incineration is not considered to be technically feasible.

**Flares** - The use of a flare requires that the VOC concentration be substantially higher than the expected concentrations of VOCs in the exhaust stream. The expected VOC concentration of the exhaust gases from the pouring and cooling processes will likely be in the range of 20 to 100 ppm as propane. Flares are typically used where the VOC concentration is high enough to sustain combustion (approximately 13,000 ppm), and are not suitable for the pouring and cooling processes.

Carbon Adsorption - The primary concern with the use of carbon adsorption is the potential for fouling of the carbon bed. While this unit would be placed downstream of the dust collection equipment, there will still be some level of particulate matter that could lead to contamination or plugging. There is also insufficient data regarding the speciation of VOCs to properly evaluate the feasibility of this technology. Limited available data suggests that higher molecular weight VOCs are present in the exhaust, and these compounds could very well contaminate or foul carbon beds. For these reasons, carbon adsorption is not considered to be technically feasible. In addition, this technology has not been used in practice for similar applications.

### **Step 3 – Rank Remaining Control Technologies by Control Effectiveness**

The remaining technically feasible approaches for controlling VOC emissions from chemically bonded mold lines are:

<b>Control Technology</b>	<b>Control Efficiency (%)</b>
Regenerative Thermal Oxidizer	95% destruction 100% capture
Emission Limits	None

### **Step 4 - Evaluate the Most Effective Controls and Document the Results**

Harrison Steel Castings Company provided IDEM, OAQ with a detailed cost-effectiveness analysis and supporting data of capital and operating costs for an RTO. The estimated total capital cost was calculated with the use of a factoring method of determining direct and indirect installation costs. The basic equipment costs were obtained from vendor's quoted prices. Annualized costs were developed based on information from vendors and a literature review. The analysis assumed an interest rate of 7.5% and an equipment life of 10 years.

The basis of cost effectiveness, used to evaluate the control options, is the ratio of the annualized cost to the amount of VOC (tons) removed per year. This analysis shows that the installation of an RTO on the cooling process would cost \$118,092 per ton of VOC controlled (see detailed calculations in Table 1).

The use of no add-on control with an emission limit of 1.40 pounds of VOC per ton will not incur extra cost to implement. A summary of the cost figures determined in the analysis is provided in the table below:

<b>Option</b>	<b>Control Efficiency (%)</b>	<b>Estimated Capital Costs (\$)</b>	<b>Estimated Annualized Costs (\$)</b>	<b>Estimated VOC Controlled (tons/yr)</b>	<b>Cost-effectiveness (\$/ton controlled)</b>
RTO	95% destruction 100% capture	\$7,050,000	\$4,350,642	36.84	\$118,092
Emission Limits	0	0	0	0	NA

A review of other Indiana BACT determinations revealed that no other similar source has spent this much to control VOCs. The table below contains the results of this review:

Company / Location	Year Issued	Process Description	Emission Limits	Control Required
Brillion Iron Works Brillion, Wisconsin	1997	Automated Line PUCB Molds	1.3% resin content of the molds. 8.0 lbs VOC per ton metal for the mold line.	No Control
Hayes Lemmerz International Cadillac, Michigan	2001	Iron Castings made with Airset Molds	67,000 tons produced per year 26.7 ton/year VOC Limit Operate the RTO at 1500°F. Compliance test due in 2005	RTO on Pouring and Cooling
International Truck & Engine Corp. Indianapolis, Indiana	2004	PUCB mold and cure process	1.68 lb/ton for pouring and cooling 0.179 lb/ton for rollout	RTO on rollout

#### **Step 5 – Select BACT**

At a cost of \$118,092 per ton of VOC controlled, an RTO is not cost effective for the pouring and cooling process. Also, based on the data search, the only chemically bonded casting lines controlled by add-on control device (RTO) is Hayes Lemmerz International in Cadillac, Michigan. The main distinguishing feature of the process at that source as compared with Harrison Steel Castings process is that the Hayes Lemmerz process uses a casting line rather than floor molding where the emissions from the pouring and cooling process are much more amenable to capture and control.

Harrison Steel is proposing to meet an emission limit of 1.40 pounds of VOCs per ton of metal for the pouring/cooling process. Therefore, IDEM has determined the BACT for the pouring/cooling control of VOC emissions from this process as follows:

- (1) The VOC emissions from the pouring/cooling operation shall be limited to 1.40 pounds per ton of metal poured and 8.85 pounds per hour.
- (2) The resin content shall not exceed 1.23%.

Cost Item	Average Cost Factor		Cost (\$s)	Basis of Costs
Direct Costs:				
2 RTO Units -145,000 ACFM each			\$ 4,000,000	Vendor Quote
Instruments/controls	Included			EPA Cost Manual Table 2.8
Taxes	0.05		\$ 200,000	
Freight	0.05		\$ 200,000	EPA Cost Manual Table 2.8
Base Price:			\$ 4,400,000	
Installation costs, direct:				
Foundations/Supports	0.08		\$ 352,000	EPA Cost Manual Table 2.8
Erection/handling	0.14		\$ 616,000	
Electrical	0.04		\$ 176,000	
Piping	0.02		\$ 88,000	
Insulation	0.01		\$ 44,000	
Painting	0.01		\$ 44,000	
Total Installation Costs:			\$ 1,320,000	
TOTAL DIRECT COSTS (Base Price + Installation)=			\$ 5,720,000	
Installation costs, indirect:				
Engineering/supervision	0.10		\$ 440,000	EPA Cost Manual Table 2.8
Construction/field expenses	0.05		\$ 220,000	
Construction fee	0.10		\$ 440,000	
Start-up	0.02		\$ 88,000	
Performance Test			\$ 10,000	Engineering Estimate
Contingencies	0.03		\$ 132,000	EPA Cost Manual Table 2.8
TOTAL INDIRECT COSTS=			\$ 1,330,000	
TOTAL CAPITAL COSTS (Direct + Indirect)=			\$ 7,050,000	
Direct Operating Costs:		hours/year		
Operator (\$/HR X HRS/YR)	16.79	1095	\$ 18,385	EPA guidance - 0.5 hour per shift per device
Supervision(15% of labor)			\$ 2,758	EPA Cost Manual
Operating Materials:				
Maintenance Labor	20.99	1095	\$ 22,984	EPA Guidance (.5 hour/shift/device)
Maintenance Materials (100% of labor)			\$ 22,984	
Replacement parts (as required)	5% of equipment costs		\$ 200,000	
Utilities:				
Electricity (\$/KWHxKWH/yr)	\$.0534/kw		\$ 105,813	EPA Cost Manual page 2-43
Gas (\$/10 <sup>3</sup> ft <sup>3</sup> x 10 <sup>3</sup> /yr)	\$9.414/ kCF		\$ 2,628,337	EPA Cost Manual
TOTAL DIRECT OPERATING COSTS (A)=			\$ 3,001,261	
Indirect operating (fixed) costs:				
Overhead	60% of O & M labor/materials		\$ 40,267	EPA Cost Manual
Property Tax	1% of capital costs		\$ 70,500	
Insurance	1% of capital costs		\$ 70,500	
Administration	2% of capital costs		\$ 141,000	
Capital Recovery CRF=	0.14569	.5% for 10 year	\$ 1,027,115	
TOTAL FIXED COSTS (B)=			\$ 1,349,381	
TOTAL ANNUALIZED COSTS (A +B minus C)=			\$ 4,350,642	
Uncontrolled Emissions Rate (tons/year)			38.78	
Control System Efficiency based on 100% capture and 95% control			95.0%	
Controlled Emissions Rate (tons/year)=			1.94	
VOC Emissions Controlled, tons/year			36.84	
Cost (\$/ton)=			\$118,092	

Table 1 – RTO Economic Analysis for the Pouring/Cooling Process.

## Shakeout Process

### Step 1 – Identify Control Options

The following technologies were evaluated to control VOC emissions from the shakeout process:

- (a) The EPA's RACT/BACT/LAER Clearinghouse (RBLC) was first searched to obtain recent determinations of VOC emission controls for chemically bonded casting lines. There were no specific entries in the RBLC for chemically bonded mold lines, except for the permit limitations (no add-on control) for Harrison Steel Castings described above. Other known permits, which may have contained VOC emission limitations for chemically bonded mold lines were also searched.
- (b) Harrison Steel also evaluated a variety of control technologies, including the following:

Control Technology	Control Efficiency	Required VOC inlet conc.	Other Considerations	Technical Feasibility
Regenerative Thermal Oxidizer	94-98%	1,000 - 10,000 ppm < 50% LEL	NA	yes
Catalytic Incinerator	92-98%	100 - 1,000 ppm <25% LEL	Contaminants in the exhaust stream can poison or foul the catalyst bed	no
Flare	98%	> 13,000 ppm 100% UEL	Exhaust stream concentration must be high enough to sustain combustion	no
Carbon Adsorption	94-95%	10 - 10,000 ppm	Contaminants in the exhaust stream can poison or foul the carbon adsorption media	no

- (c) Evaluation of process materials:

The VOC emission from the pouring/cooling and shakeout processes result from the breakdown of the resins materials in the mold when they come into contact with the hot molten metal. The amount of VOCs emitted can be affected by both the resin content and the type of resin used. Newer resin systems have been developed which emit lower levels of VOCs, and the resin system that Harrison Steel uses is a lower emitting resin according to the resin manufacturer. The source has also been successful in lowering the resin content of the molds from 1.33% to 1.23%.

### Step 2 – Eliminate Technically Infeasible Control Options

Based on the results from the RBLC database search, vendor review, and evaluation of the control technologies, it was determined that the use of a catalytic incinerator, flare and carbon adsorption are not technically feasible options for this source for the following reasons:

Catalytic Incinerator - The primary concern with the use of catalytic incineration is the potential for fouling of the catalyst. While this unit would be placed downstream of the dust collection equipment, there will still be some level of particulate matter that could lead to contamination or plugging. There is also insufficient data regarding the speciation of VOCs to properly evaluate the feasibility of this technology. Limited available data suggests that higher molecular weight VOCs are present in the exhaust, and these compounds could very well contaminate or foul catalyst beds. For these reasons, catalytic incineration is not considered to be technically feasible.

Flares - The use of a flare requires that the VOC concentration be substantially higher than the expected concentrations of VOCs in the exhaust stream. The expected VOC concentration of the exhaust gases from the shakeout process will likely be in the range of 20 to 100 ppm as propane. Flares are typically used where the VOC concentration is high enough to sustain combustion (approximately 13,000 ppm), and are not suitable for the pouring and cooling processes.

Carbon Adsorption - The primary concern with the use of carbon adsorption is the potential for fouling of the carbon bed. While this unit would be placed downstream of the dust collection equipment, there will still be some level of particulate matter that could lead to contamination or plugging. There is also insufficient data regarding the speciation of VOCs to properly evaluate the feasibility of this technology. Limited available data suggests that higher molecular weight VOCs are present in the exhaust, and these compounds could very well contaminate or foul carbon beds. For these reasons, carbon adsorption is not considered to be technically feasible. In addition, this technology has not been used in practice for similar applications.

### **Step 3 – Rank Remaining Control Technologies by Control Effectiveness**

The remaining technically feasible approaches for controlling VOC emissions from chemically bonded mold lines are:

<b>Control Technology</b>	<b>Control Efficiency (%)</b>
Regenerative Thermal Oxidizer	95% destruction 100% capture
Emission Limits	None

### **Step 4 - Evaluate the Most Effective Controls and Document the Results**

Harrison Steel Castings Company provided IDEM, OAQ with a detailed cost-effectiveness analysis and supporting data of capital and operating costs for an RTO. The estimated total capital cost was calculated with the use of a factoring method of determining direct and indirect installation costs. The basic equipment costs were obtained from vendor's quoted prices. Annualized costs were developed based on information from vendors and a literature review. The analysis assumed an interest rate of 7.5% and an equipment life of 10 years.

The basis of cost effectiveness, used to evaluate the control options, is the ratio of the annualized cost to the amount of VOC (tons) removed per year. This analysis shows that operating an RTO on the shakeout process would cost \$11,695 per ton of VOC controlled and would cost over \$1,800,000 to install (see detailed calculations in Table 2).

The use of no add-on control with an emission limit of 3.32 pounds of VOC per ton will not incur extra cost to implement. A summary of the cost figures determined in the analysis is provided in the table below:

<b>Option</b>	<b>Control Efficiency (%)</b>	<b>Estimated Capital Costs (\$)</b>	<b>Estimated Annualized Costs (\$)</b>	<b>Estimated VOC Controlled (tons/yr)</b>	<b>Cost-effectiveness (\$/ton controlled)</b>
RTO	95% destruction 100% capture	\$1,833,639	\$1,021,719	87.37	\$11,695
Emission Limits	0	0	0	0	NA

The following table summarizes previous BACT determinations for VOC emissions from similar operations:

Company / Location	Year Issued	Process Description	Emission Limits	Control Required
Brillion Iron Works Brillion, Wisconsin	1997	Automated Line PUCB Molds	1.3% resin content of the molds. 8.0 lbs VOC per ton metal for the mold line.	No Control
Hayes Lemmerz International Cadillac, Michigan	2001	Iron Castings made with Airset Molds	67,000 tons produced per year 26.7 ton/year VOC Limit Operate the RTO at 1500°F. Compliance test due in 2005	RTO on Pouring and Cooling
International Truck & Engine Corp. Indianapolis, Indiana	2004	PUCB mold and cure process	1.68 lb/ton for pouring and cooling 0.179 lb/ton for rollout	RTO on rollout

### **Step 5 – Select BACT**

At a cost of \$11,695 per ton of VOC controlled, an RTO is not cost effective for the shakeout process. A review of other Indiana BACT determinations revealed that no other similar source has spent this much to control VOCs.

Harrison Steel is proposing to meet an emission limit of 3.32 pounds of VOCs per ton of metal for the shakeout process. Therefore, IDEM has determined the BACT for the shakeout control of VOC emissions from this process as follows:

- (1) The VOC emissions from the shakeout operation shall be limited to 3.32 pounds per ton of metal poured and 21.0 pounds per hour.
- (2) The resin content shall not exceed 1.23%.

Cost Item	Average Cost Factor		Cost (\$s)	Basis of Costs
Direct Costs:				
60000 acfm RTO			\$ 1,237,204	Vendor Quote
Instruments/controls	included			EPA Cost Manual Table 2.8
Taxes	0.05		\$ 61,860	
Freight	0.05		\$ 61,860	EPA Cost Manual Table 2.8
Base Price:			\$ 1,360,924	
Installation costs, direct:				
Foundations/Supports	0.08		included	EPA Cost Manual Table 2.8
Erection/handling	0.14		included	
Electrical	0.04		included	
Piping	0.020		\$ 27,218	
Insulation	0.01		\$ 13,609	
Painting	0.01		\$ 13,609	
Total Installation Costs:			\$ 54,437	
TOTAL DIRECT COSTS (Base Price + Installation)=			\$ 1,415,361	
Installation costs, indirect:				
Engineering/supervision	0.10		\$ 136,092	EPA Cost Manual Table 2.8
Construction/field expenses	0.05		\$ 68,046	
Construction fee	0.10		\$ 136,092	
Start-up	0.02		\$ 27,218	
Performance Test			\$ 10,000	Engineering Estimate
Contingencies	0.03		\$ 40,828	EPA Cost Manual Table 2.8
TOTAL INDIRECT COSTS=			\$ 418,277	
TOTAL CAPITAL COSTS (Direct + Indirect)=			\$ 1,833,639	
Direct Operating Costs:		hours/year		
Operator (\$/HR X HRS/YR)	16.79	547.5	\$ 9,193	EPA guidance - 0.5 hour per shift per device
Supervision(15% of labor)			\$ 1,379	EPA Cost Manual
Operating Materials:				
Maintenance Labor	20.99	547.5	\$ 11,491	EPA Guidance (.5 hour/shift/device)
Maintenance Materials (100% of labor)			\$ 11,491	
Replacement parts (as required)	5% of equipment costs		\$ 61,860	
Utilities:				
Electricity (\$/KWHxKWH/yr)	\$.0534/kw		\$ 21,892	
Gas (\$/10 <sup>3</sup> ft <sup>3</sup> x 10 <sup>3</sup> /yr)	\$13.45/ kCF		\$ 543,794	
TOTAL DIRECT OPERATING COSTS (A)=			\$ 661,099	
Indirect operating (fixed) costs:				
Overhead	60% of O & M labor/materials		\$ 20,132	EPA Cost Manual
Property Tax	1% of capital costs		\$ 18,336	
Insurance	1% of capital costs		\$ 18,336	
Administration	2% of capital costs		\$ 36,673	
Capital Recovery CRF=	0.14569	7.5% for 10 year	\$ 267,143	
TOTAL FIXED COSTS (B)=			\$ 360,620	
TOTAL ANNUALIZED COSTS (A +B minus C)=			\$ 1,021,719	
Uncontrolled Emissions Rate			91.96	
Control System Efficiency based on 100% capture and 95% control			95.0%	
Controlled Emissions Rate (tons/year)=			4.60	
VOC Emissions Controlled, tons/year			87.37	
Cost (\$/ton)=			\$11,695	

Table 2 – RTO Economic Analysis for the Shakeout Process.